Design Document

Version 4.0

TheraTouch

5/7/2012

Revision Signatures

In signing below, each team member acknowledges that he/she has read the following document, given feedback as to the completeness of the document, and checked the document for grammatical and typographical errors.

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Revision History

The chart below demonstrates revisions on the current document:

Version	Changes Made	Date Edited
Version 1.0	Initial draft to be delivered November 13, 2011	11/13/2011
Version 1.1	Use Case descriptions removed, Updated information, Diagram revisions	11/15/2011
Version 2.0	Added Activity prototypes and upgraded Architecture Design	2/9/2012
Version 3.0	Added upgraded Architecture Design, added new activity prototypes, updated Use Case Diagram to reflect requirements document	3/10/2012
Version 4.0	Added prototypes and screenshots of new activities. Updated TheraLink screenshots. Fourth and final draft of this document.	4/29/2012

Contents

1. Introduction

1.1. Purpose

This document provides a detailed explanation of the *TheraTouch* system. By using requirements and specifications given by Texas Health Resources and one of their Physical Medicine & Rehabilitation departments, the following gives a detailed description of the design of the system and how users will interact with the system.

1.2. Identification of Project

The senior design team shall develop a system for Texas Health Resources and the Director of Physical Medicine & Rehabilitation at Harris Methodist Hospital (Hurst-Euless-Bedford) that utilizes the multi-touch technology of the Microsoft Surface in a therapy setting to promote and track user progress. Not only can positive physical results be expected from the use of this equipment, but also cognitive growth and improvement. By using activities that capture accuracy, speed, and other measurable conditions, statistics will be collected and gathered into reports for Physicians and Clinician to review. The system created will provide an interesting and interactive way for users to heal while having fun.

The purpose of the first iteration is to bring both teams together to build a common framework for the project before splitting back into respective teams to develop therapeutic activities to deploy to the Microsoft Surface. This structure shall allow for simple additions and changes to activities, universal database use, and a user-friendly interface.

For the second, third, and fourth iterations of the project, all to be completed in the Spring Semester, each team will develop defined physical and cognitive activities, create a web-based application for clinical staff use, test all of these systems, and prepare to present the project to the client.

1.3. Scope of Project

For this project, it is essential to have a strong framework that supports compatibility and overall cohesiveness. At the beginning stages of development, this framework will be built off of the *Healing Touch* Senior Design Project from 2010-2011 by both current Senior Design teams combined.

There are two major components that are stored within a database on the server – sensitive and non-sensitive user records. The pieces of data considered sensitive include information such as a user's date of birth or name. To be determined by the client, there will only be one piece of sensitive user data stored in the database to uphold HIPAA laws and regulations. Non-sensitive user data is collected after each activity has been performed and is stored as statistical numbers relating to fields similar to speed, accuracy, and other measurable actions determined specifically for each activity.

Also stored within the database are all settings for activities and sessions pre-determined by the clinician. The framework will gather the information from respective tables in the database to configure a therapy session for a user to deploy to the Microsoft Surface.

On the Microsoft Surface, there will be a common structure to house activities created for a therapeutic purpose. The planned benefit of providing such a design is to allow for smooth changes for developers, including the ease of adding activities and creating sessions, and user-friendly conditions once the unit has been delivered to the client.

The staff member will have secure access to a web-based application to add or edit user information, choose specific activities for therapy sessions, and review user reports and results from testing. In order for this to adhere to policies set by the government and Texas Health Resources, this program must protect all sensitive data, and only those with special permissions will be allowed access to user data.

1.4. Overview of Document

Section 1	*Overview of project and the following document*
Section 2	*Glossary of terms found within this document*
Section 3	*Discusses constraints of the system, whether hardware or software related, paired with guidelines provided by the client.*
Section 4	*A brief overview of the system, each general element, and the interactions between them.*
Section 5	*Provides the database architecture with an explanation of the data being stored within it*
Section 6	*A detailed description of the framework deployed to the Microsoft Surface including state, sequence, and class diagrams to increase understanding*
Section 7	*Activity, sequence, and class diagrams providing details on the web-based staff Application*
Section 8	*Information on specific activities being deployed to the Microsoft Surface*
Section 9	*Contains prototypes of user interfaces for both the Microsoft Surface and the staff Application*
Section 10	*Appendix. Includes Use Case Diagrams*

2. Glossary

Activity	A task on the Surface used to assess a patient's cognitive and physical condition.
Clinician	The staff member that is expected to assist users during a Session.
Cognitive	Scientific term for a mental process
Freeplay	An activity mode in which no information is collected or saved to the database. No user login required.
HIPAA	Health Insurance Portability and Accountability Act
Manager	The staff member that can perform all the actions the other staff members can perform, as well as Manager only functions.
Microsoft Surface	A multi-touch table top hardware device developed by Microsoft used as the device for therapeutic activities to be performed on.
Practice Mode	An activity mode that can be selected from a session before that activity is played in Test Mode. No information is gathered or saved to the database. Activities launched in practice mode run under the same settings that they would in Test Mode.
Session	A set of pre-determined activities on the Surface that will be used during patient therapy.
Session Controller	The class used to handle sessions in the Surface framework.
Session Mode	An activity mode that is used to generate and gather data from session activities that are then stored to the database. Launches with settings that were specified in the web application when the session was created.
Staff	A category of actors that includes Manager and Clinician.
TheraID	An auto-generated number assigned to each user by the TheraLink web application.
Therapeutic	Relating to the treatment of disease, injury, or disorders by remedial methods
TheraTouch	The TCU Computer Science 2012 Senior Design Project and framework.
THR	Texas Health Resources is the client for this project.
User	The actor that will be on the Surface playing the activities

3. Design Constraints

3.1. Assumptions and Dependencies

The framework assumes the following Support Environment is available for proper execution

- Microsoft Surface V1.1 (Version 1) Service Pack 1
- Modern web browser with JavaScript support on the staff PC
- Microsoft Windows Vista SP1

The framework assumes a database connection is present for the web application and for storing user information from activities on the surface.

The framework assumes it is deployed to a clinical environment with a user database which could be merged with the Hands on Therapy database.

3.2. General Constraints

Environmental Constraints	- The Database is restricted to limited information that can identify a user - Access will likely be restricted to THR medical records
Functionality Constraints	- Microsoft Surface has a limited response time due to software limitations - Reports on staff application may be vague due to lack of access to user's full medical history - Part of project depends on receiving user information from THR system - Activities must be user-friendly for many different types of users

3.3. Goals and Guidelines

The senior design team will be working closely with Texas Health Resources to develop this system. The main technology contact with THR is Mike Skupien, an Application Architect. We also have the knowledge and assistance of Jeanie Parsley, the Director of Physical Therapy with Texas Health Harris Methodist Hospital (Hurst-Euless-Bedford).

The main goal of the project is to deliver a Microsoft Surface unit and the developed software package to Texas Health Resources for use in a rehabilitation and therapeutic environment in April/May of 2012.

3.4. Development Methods

Activities will be developed within the Microsoft Surface and XNA framework for Microsoft. *TheraLink* web application will be developed using ASP.NET. An object oriented approach will be used.

The following software is critical for development:

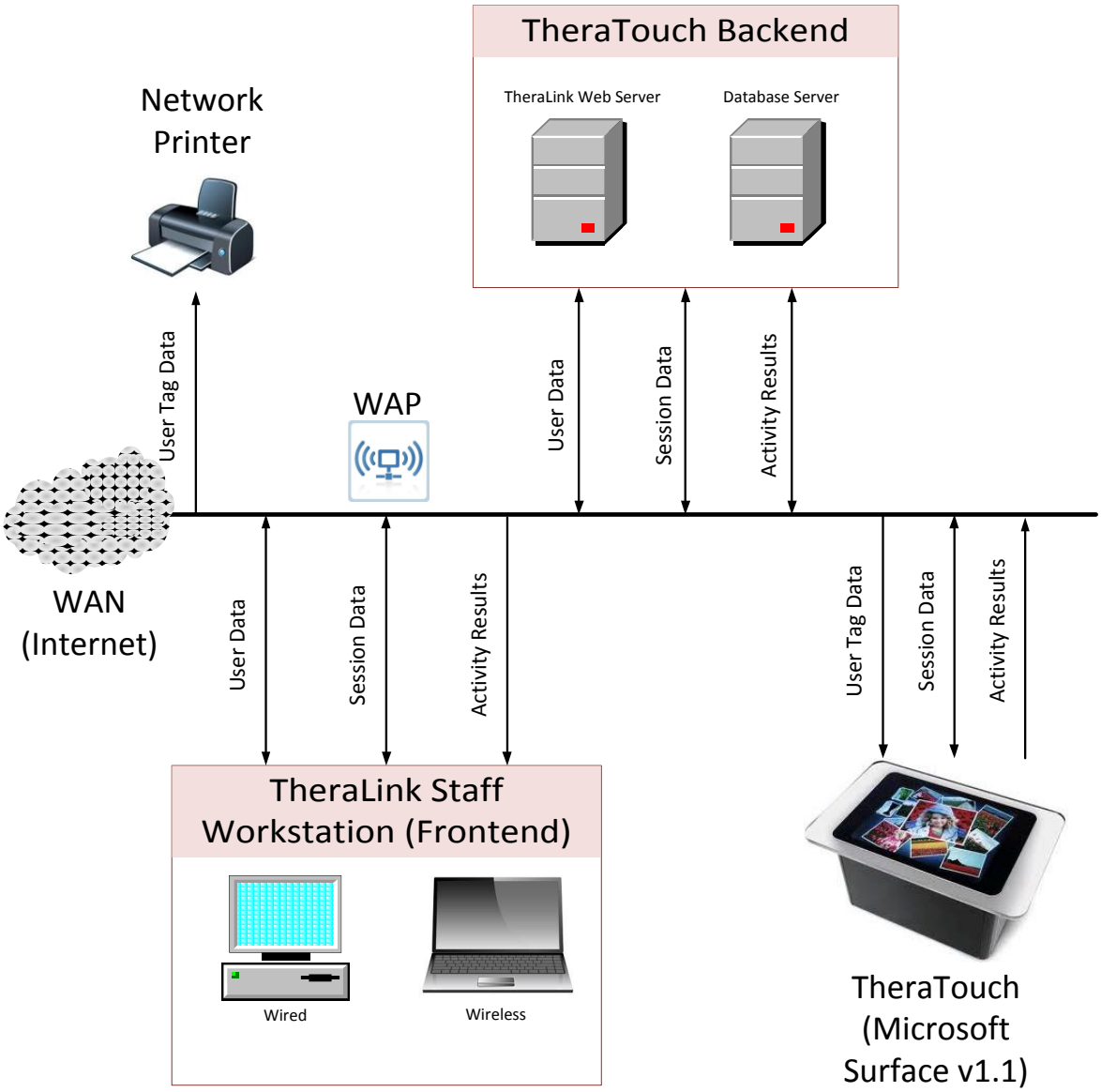
- **Primary Support Environment**
  - Windows Vista
  - Windows 7 32 bit
  - Adobe Creative Suite CS 5
  - Camtasia Studio 7
  - Microsoft Visio 2010
  - Microsoft Project 2010
  - Subversion
  - Tortoise SVN
  - CoreFTP Lite

- **Microsoft Surface Environment**
  - Microsoft Visual Studio 2008
  - Microsoft Surface SDK 1.0
  - Microsoft XNA Framework
  - XNA Game Studio 3.0

- **Clinician Web Application Environment**
  - Microsoft Visual Studio 2010
  - ASP.NET
  - Microsoft SQL Server 2008 R2 SP1
  - IIS 7.5

- **Other Software**
  - Microsoft Word 2010
  - Microsoft Excel 2010
  - Microsoft PowerPoint 2010

4. System Architecture



4.1. Microsoft Surface

The Microsoft Surface shall contain all activity software and connect to the database for activity settings and user-specific activity instructions. The Surface framework will have several different modes. In Freeplay Mode, no information is collected or returned to the database. Sessions specified by the Staff Application are loaded by the framework. The activities will gather information about the user's responses. This statistical data will be submitted to the database for storage, allowing the Web Application access to the information for analysis by the staff.

4.2. Database

The database shall store partial user information, activity configurations, and reports to be used in the system. The database will act as the link between the Staff Application and the framework on the Microsoft Surface. Staff credentials and access levels will also be stored in the database.

4.3. Clinician Web Application

The Clinician Web Application shall connect to the database to store and retrieve all information pertaining to the user. The application shall also be able to create and edit the configuration information for all activities deployed on the Microsoft Surface through the database.

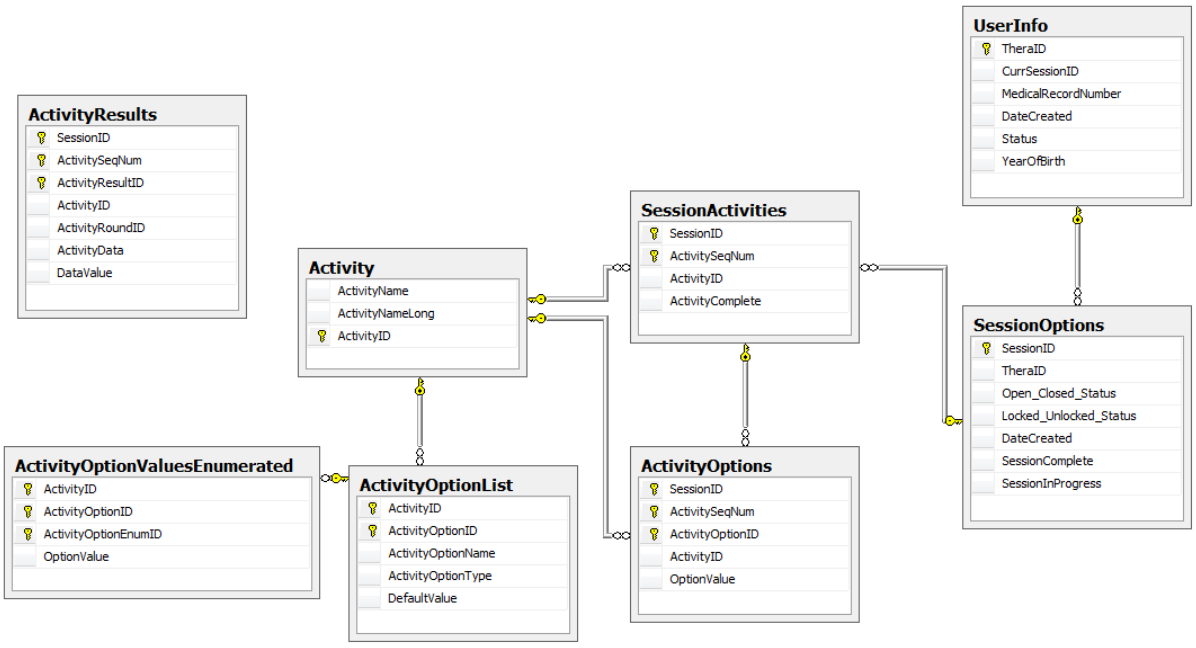
During user setup, the clinician will have the ability to insert user information such as name, date of birth, and other patient-specific attributes. Only the *TheraID* and medical record number will be stored in related tables in the database for recall later. The *TheraID* number will remain assigned to the user, and will act as their "login" key for the Microsoft Surface. This identifier is the only method of associating an actual patient to their records in the database.

For each therapy session, the clinician will use the application to choose activities to be utilized based on user needs. After the activities have been selected, there will be options available to personalize, such as speed, difficulty level, and other activity specific options.

Another feature of the Clinician web application shall be the ability to run reports based on particular user information. This information can be used for analysis such as tracking user progress, diagnosing, and formulating treatment plans.

5. Database Design

The database will contain all the information needed by the project. In order to remain flexible with the activities that will be designed, information about results and activity settings will be stored generically.



UserInfo Table-This table stores basic information about the user.

Column	Description
TheraID -PK	Unique identifier of the user used by this project.
CurrSessionID	Stores the SessionID of the currently active session for the user.
MedicalRecordNumber	THR identifier of the user.
DateCreated	Date the user was added to the database.
Status	Flag to handle whether the user should be considered active. Either "Active" or "Inactive".
YearOfBirth	The year that the patient was born.

SessionOptions Table-Relates a session to a user.

Column	Description
SessionID -PK	Unique identifier for this session of user therapy.
TheraID -FK	The user associated with this session. Key from UserInfo table.
Opened_Closed_Status	Flag of either "Opened" or "Closed" that specifies whether the session can be modified or not.
Locked_Unlocked_Status	Flag that specifies whether the session order is locked in the Surface Framework. Either "Locked" or "Unlocked".
DateCreated	The date this session was created in the web application.
SessionComplete	Flag that indicates whether all activities in the session have been completed.
SessionInProgress	If the session is open on the TheraTouch framework, this flag is set to True.

SessionActivities Table -Relates activities in a session to a session.

Column	Description
SessionID-PK, FK	Identifies which session this record is for. Key from SessionOptions table.
ActivitySeqNum -PK	Identifies the index of the activity within Session. Used with SessionID to uniquely identify an instance of an Activity.
ActivityID -FK	Identifies which Activity this record is for. Key comes from the Activity table.
ActivityComplete	Flag of "True" or "False" that specifies if this instance of an Activity has been completed on the Surface.

Activity Table -Stores basic information about each activity that is available on the Surface.

Column	Description
ActivityID -PK	Unique identifier for the activity.
ActivityName	The title of the activity used by the Surface.
ActivityNameLong	The full title of the activity used by UI elements in the Web Application.

ActivityOptions Table -Stores information about the options used for an instance of an Activity in a particular Session.

Column	Description
SessionID –PK, FK	Identifies which session this record is for. Key from SessionActivities table.
ActivitySeqNum –PK, FK	Identifies which instance of Activity within the Session this record is for. Key from SessionActivities table.
ActivityOptionID -PK	Identifies which option is being specified by this record.
ActivityID -FK	Which general Activity this option comes from. Key from Activity table.
OptionValue	The value of the option, used by the Surface framework.

ActivityOptionList Table-Stores all the possible options for an Activity. Used by the Web Application when specifying the possible options to be used for an instance of an Activity in a Session.

Column	Description
ActivityID –PK, FK	Specifies which Activity this option is to be used for. Key from Activity table.
ActivityOptionID-PK	Identifier that is unique within the Activity, used as an artificial key to make each ActivityOption record unique.
ActivityOptionName	The name of the option, to be used in the web application.
ActivityOptionType	The type of value that can be specified. Currently the only type is "Enumerated".
DefaultValue	The default value to be used when creating an instance of an Activity within a Session.

ActivityOptionValuesEnumerated Table-Stores all the possible values for options for an Activity. Used by the Web Application when specifying the possible options to be used for an instance of an Activity in a Session.

Column	Description
ActivityID –PK, FK	Specifies which Activity this option is to be used for. Key from ActivityOptionList table.
ActivityOptionID-PK, FK	Identifier that is unique within the Activity, used as an artificial key to make each ActivityOption record unique. Key from ActivityOptionList table.
ActivityOptionEnumID-PK	Identifier that is used as an artificial key to make each record unique.
OptionValue	A possible value that can be used when specifying the option for an instance of an Activity.

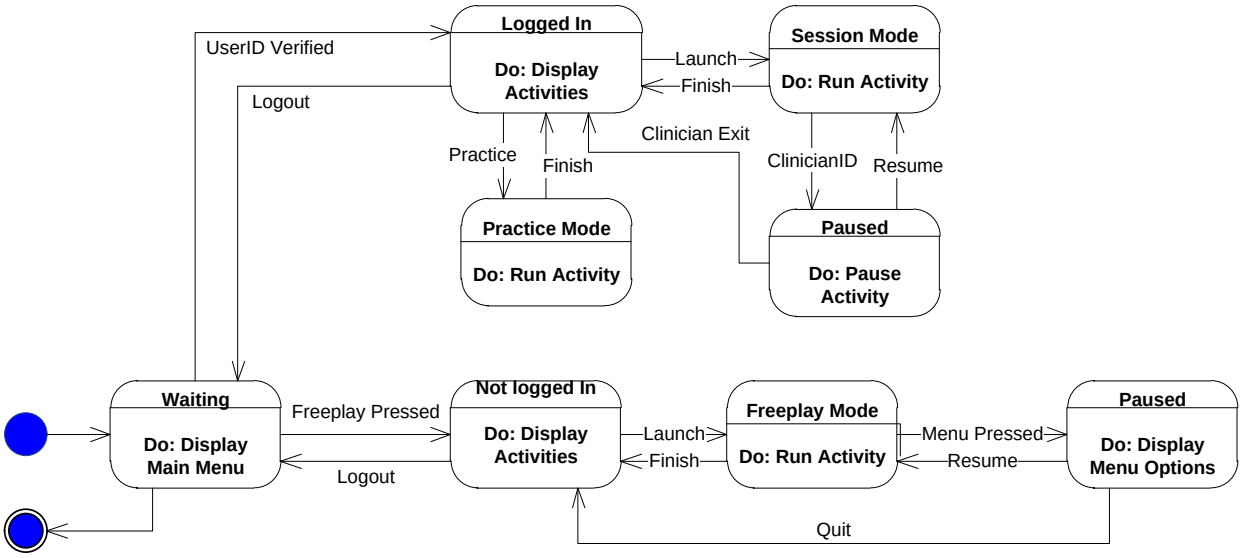
ActivityResults Table-Stores the results for activities that have been played on the Surface. Results are only stored for activities that are played as part of a session.

Column	Description
SessionID –PK	Specifies which Session this record is for. Key from Session Options table.
ActivitySeqNum -PK	Activities which instance of an Activity within a Session this record is for.
ActivityResultID -PK	Artificial key used to make the record unique.
ActivityRoundID	Indicates which round within the activity (if applicable) that this record is about. If the record is about the entire activity, the ActivityRoundID should be 0.
ActivityID	The Activity that this record is about. Key from the Activity table.
ActivityData	The name of the metric that this record is about.
DataValue	The value of the metric that was recorded while playing a Session.

6. Surface Design

6.1. State Diagrams

Detailed State Diagram

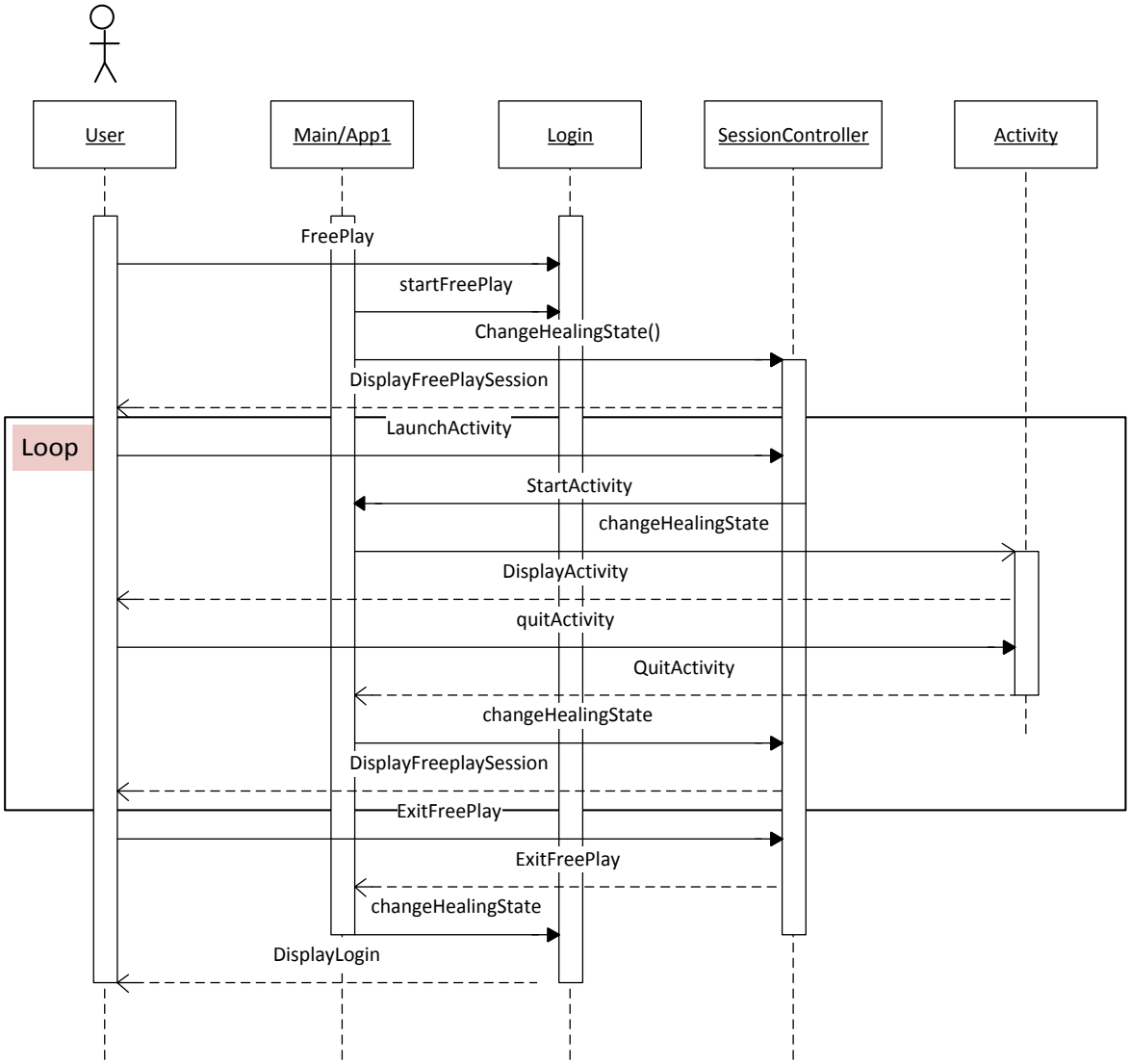


State	Description
Waiting	The Surface is waiting for user input. The Main Menu is displayed.
SessionController	The Surface is waiting for the user to select launch, practice, or logout. Pre-defined activities are displayed.
Practice Mode	The Surface runs the Activity in practice mode. Activity Options are set based on the Session. The Activity is displayed. Upon completion, no data is collected.
Session Mode	The Surface runs the Activity in Session Mode. Activity options are set based off the Session. The Activity is displayed. The staff member can pause the activity with a staff tag. Upon completion, data is collected and stored.
Pause Menu	The Surface pauses the current activity when a staff tag is recognized. Options are displayed.
FreeplayHome	The Surface is waiting for an Activity to be launch. All activities are displayed.
Freeplay Mode	The Surface runs the Activity in Freeplay Mode. Options are predefined as easy, medium, and hard. The activity is displayed.
Activity Menu	The Surface waits for user input. The Activity Menu is displayed

Stimulus	Description
SessionController	The user has placed a valid user tag on the Surface, and a Session is available.
Practice Mode	The user has logged in, selected an Activity, and pressed the practice button.
Session Mode	The user has logged in, selected an Activity, and pressed the launch button.
Pause Menu	The staff member has placed a valid staff tag on the Surface during an Activity.
FreeplayHome	The user has pressed the Freeplay button.
Freeplay Mode	The user is in FreeplayHome, selected an Activity, and pressed the launch button.
Activity Menu	In an Activity, during Freeplay Mode, the user has pressed the menu button.

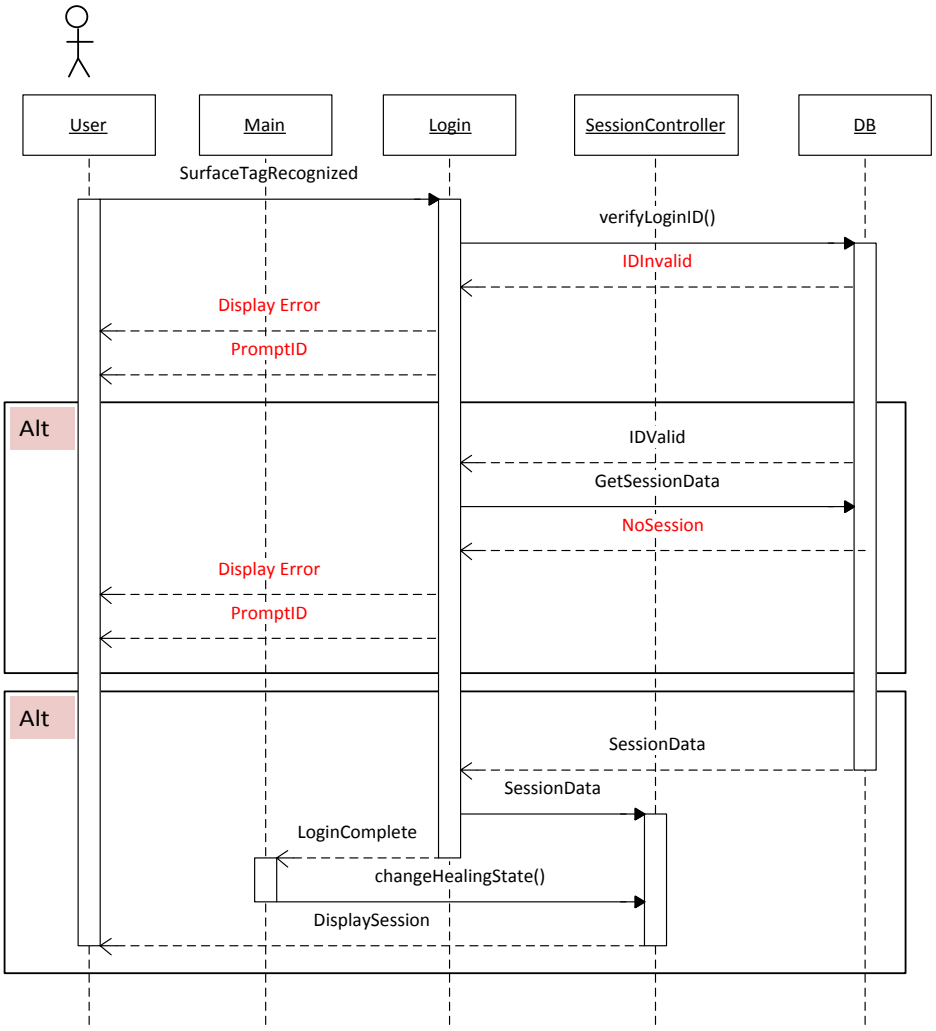
6.2. Sequence diagrams

Freeplay



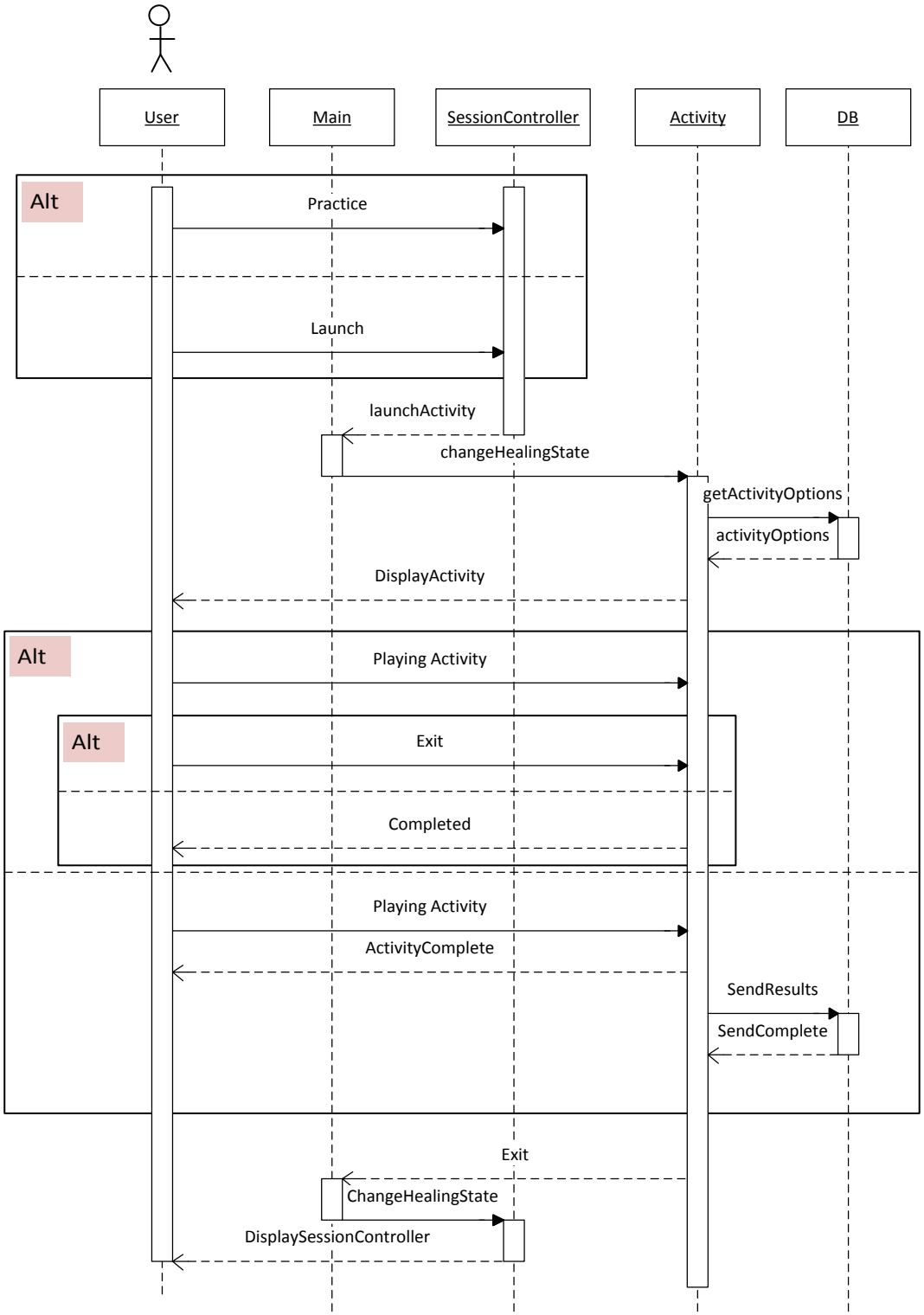
Actor/Class	Description
User	Selects Freeplay from the surface main menu screen.
Main	Sends "startFreePlay" message to the Login Class
Main	ChangeHealingState() to the SessionController.
SessionController	Displays Freeplay session to the user.
User	Selects "launch" to begin the activity.
SessionController	Sends message to Main that an activity has been started.
Main	ChangeHealingState() to a selected Activity.
Activity	Displays activity to the user.
User/Activity	Either the user selects "quit" or the activity finishes and sends the message to Main.
Main	ChangeHealingState() to the SessionController.
SessionController	Displays Freeplay session to the user.
User	Selects "Exit" from the Freeplay session menu.
SessionController	Sends a message to Main to exit the session.
Main	ChangeHealingState() to Login.
Login	Displays the surface main menu screen.

Login



Actor/Class	Description
User	Places a valid user surface tag onto the surface.
Login	Sends the tag information to the DB class.
DB	Verifies the information on the database.
DB	• If DB returns invalid user ID The Login class will display an error and prompt the user. • Else proceed.
Login	Sends a message to DB to gather session information.
DB	• If DB returns NoSession The Login class will display an error and prompt the user. • Else DB will return session data to the LogIn class.
Login	Sends the session information to the SessionController class.
Login	Sends a message to Main that the login is complete.
Main	ChangeHealingState() to SessionController.
SessionController	Gets session information from Session.
SessionController	Displays session to the user.

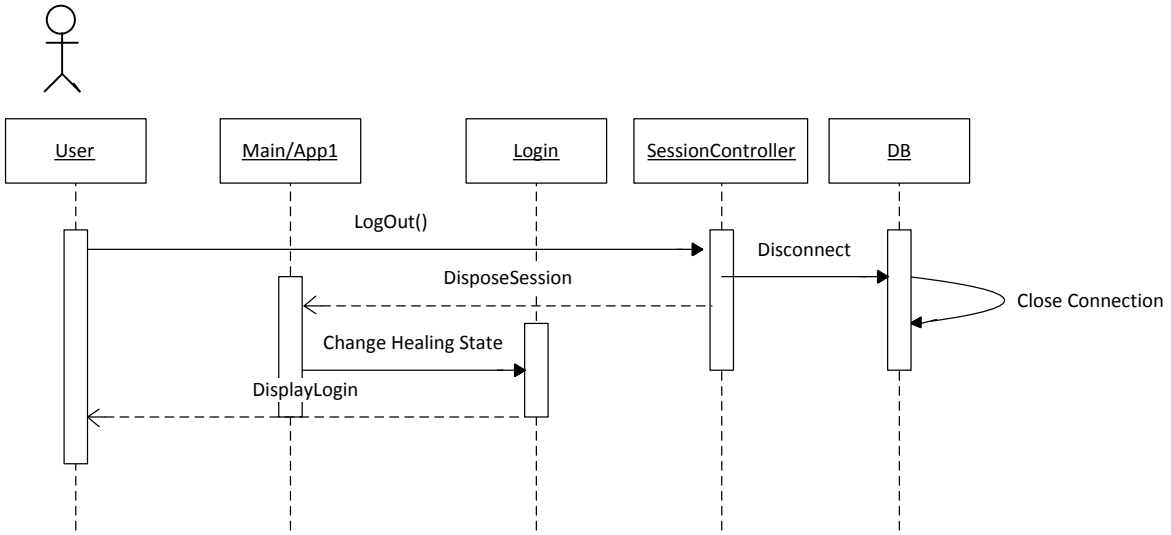
Session


User
Main
SessionController
Activity
DB
Alt
Practice
Launch
launchActivity
changeHealingState
getActivityOptions
activityOptions
DisplayActivity
Alt
Playing Activity
Alt
Exit
Completed
Playing Activity
ActivityComplete
SendResults
SendComplete
Exit
ChangeHealingState
DisplaySessionController

Actor/Class	Description
User	Selects an activity and selects practice from the dynamic session screen.
SessionController	Sends a request to DB for stored options.
DB	Gathers the options information from the database.
SessionController	Sends a message to Main to launch the activity.
Main	ChangeHealingState() to the selected activity.
Activity	Displays the activity to the user.
User/Activity	Either the user selects "quit" or the activity finishes and sends the message to Main.
Main	ChangeHealingState() to the SessionController.
SessionController	Displays the session screen to the user.

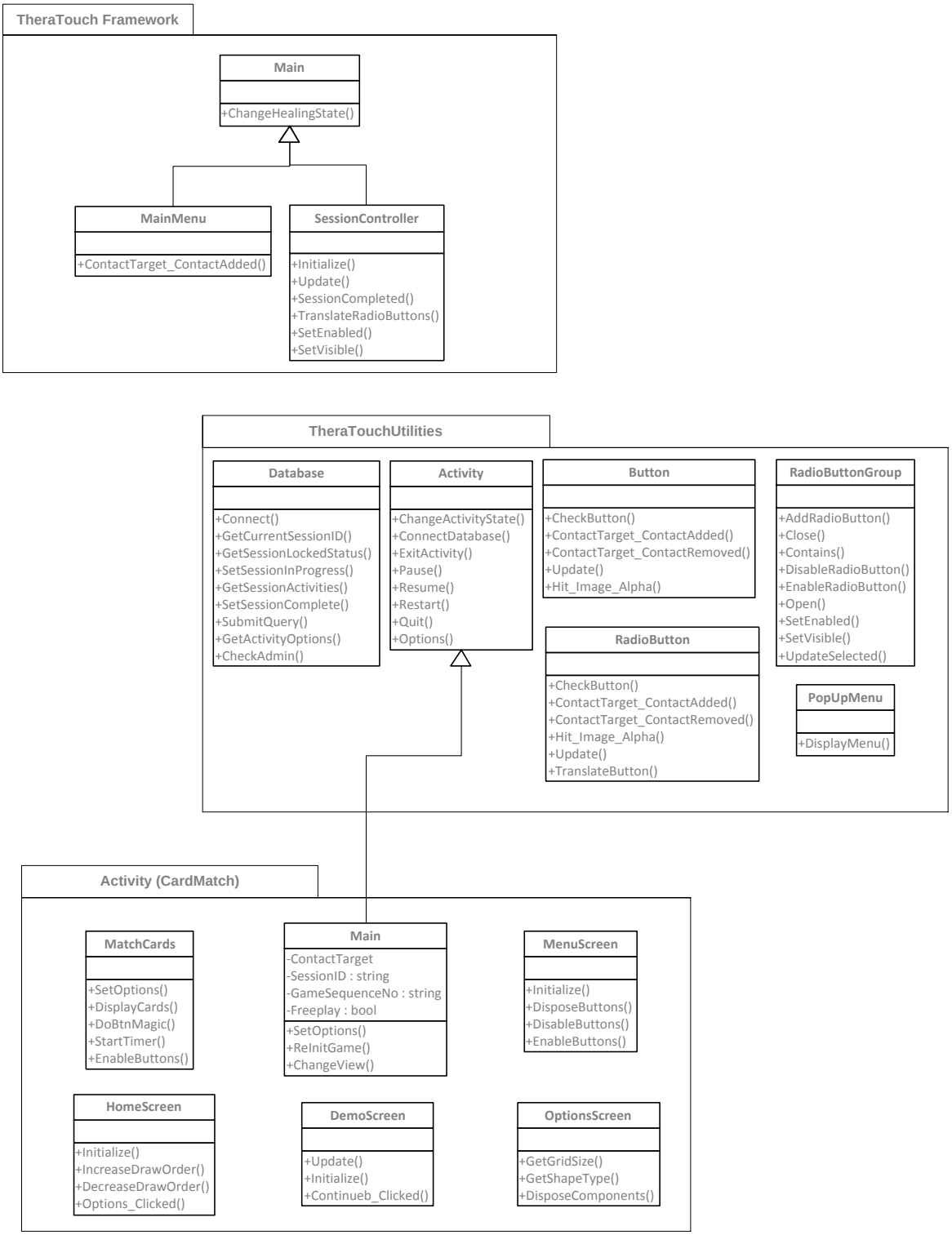
Actor/Class	Description
User	Selects an activity and selects launch from the dynamic session screen.
SessionController	Sends a request to DB for stored options.
DB	Gathers the options information from the database.
SessionController	Sends a message to Main to launch the activity.
Main	ChangeHealingState() to the selected activity.
Activity	Displays the activity to the user.
Activity	Sends the activity information to DB.
DB	Sends the activity information to the database and returns a confirmation to Activity.
Activity	Sends a message to Session that the activity has been completed and then sends an exitActivity message to Main.
Main	ChangeHealingState() to SessionController.
SessionController	Displays the session screen to the user.

Logout



Actor/Class	Description
User	Selects Logout to the SessionController.
SessionController	Sends a request to DB to logout the user.
SessionController	Sends a request to dispose of the session to Main
Main	ChangeHealingState() to Login.
Login	Displays the surface main menu screen to the user.

6.3. Surface Components (Class Diagrams)



6.3.1. Activity Design Procedure

TheraTouch

- The activity should have a Main Class
- Export the latest TheraTouchUtilities.dll to project references
- Extend the Activity class from your Main Class
- Use the utility methods contained in TheraTouchUtilities to implement database and other functionality

6.3.2. Main Class Descriptions

6.3.2.1. Main Class

The Main class is the parent class for the following classes, Database, MainMenu and SessionController. It uses the method ChangeHealingState to switch between the SessionController, MainMenu and Activity classes.

6.3.2.2. MainMenu Class

MainMenu class displays the title screen for TheraTouch. It also displays the Freeplay button. It will also detect if a user tag has been thrown down on the surface. If so it will launch into a Session. If the Freeplay button or a user tag is placed down the SessionController class will be launched.

6.3.2.3. SessionController Class

The SessionController creates a scrollable interface for users to select an activity from. If a user tag is placed down a session is launched and the SessionController will display only the icons for the activities that are stored for that particular session. If the Freeplay button is pressed it will display the selectable icon of all the current activities in TheraTouch.

6.3.2.4. TheraTouchUtilities.dll (Class Package)

TheraTouchUtilities is a .dll file that is referenced in TheraTouch and every Activity that is included in Theratouch. It includes a number of classes common to every activity in TheraTouch. These include classes for Buttons, Radio Buttons, Database Connections and a Pop-up menu.

6.3.2.5. Activity Class

The Activity class is part of the TheraTouchUtilities.dll. It provides methods for controlling the activity such as Pause, Resume, Restart and ExitActivity.

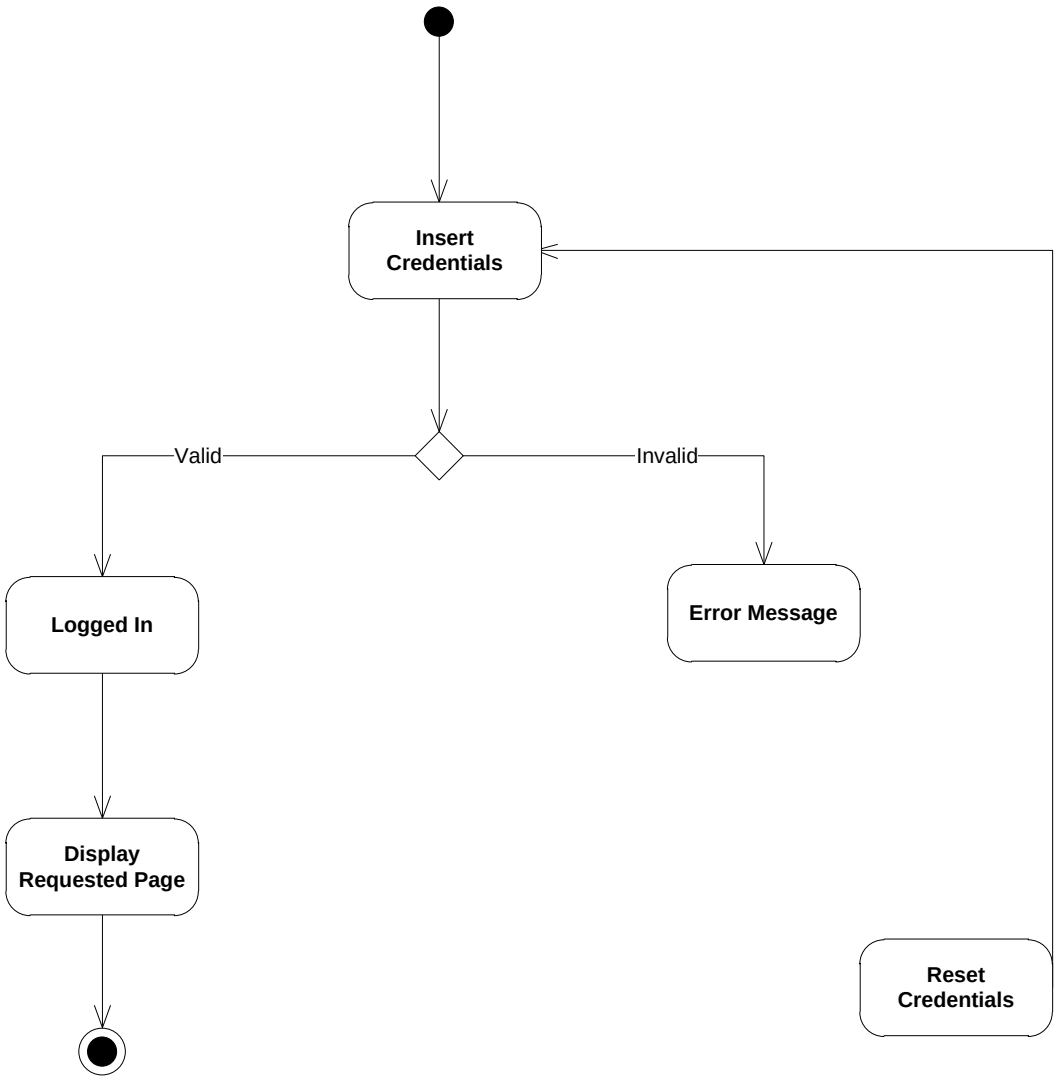
6.3.2.6. Database Class

The Database class is part of the TheraTouchUtilities.dll. It provides methods for database connectivity as well as retrieving data and saving data from the database.

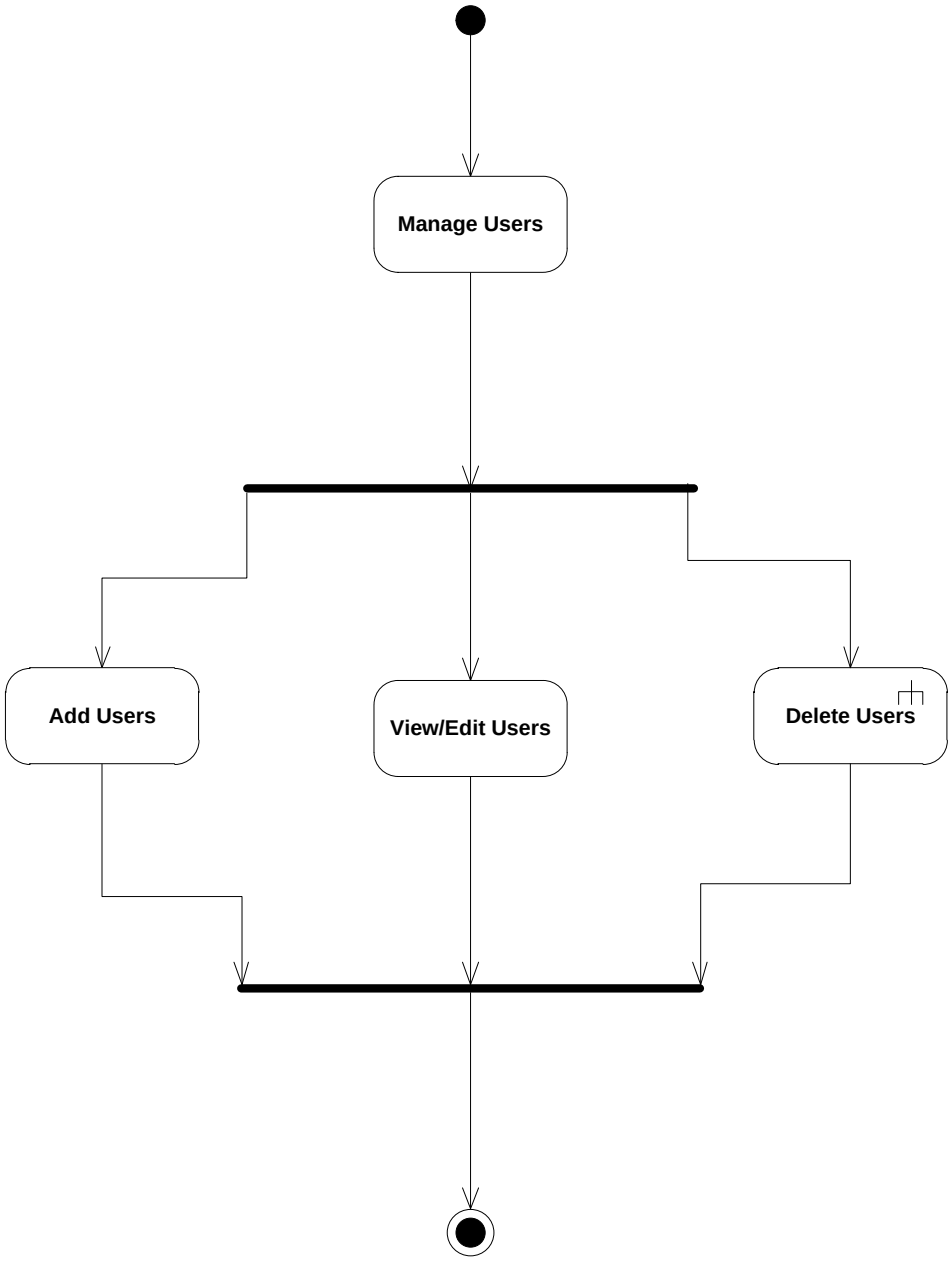
7. Detailed Design – Clinician Web Application

7.1. Activity Diagrams

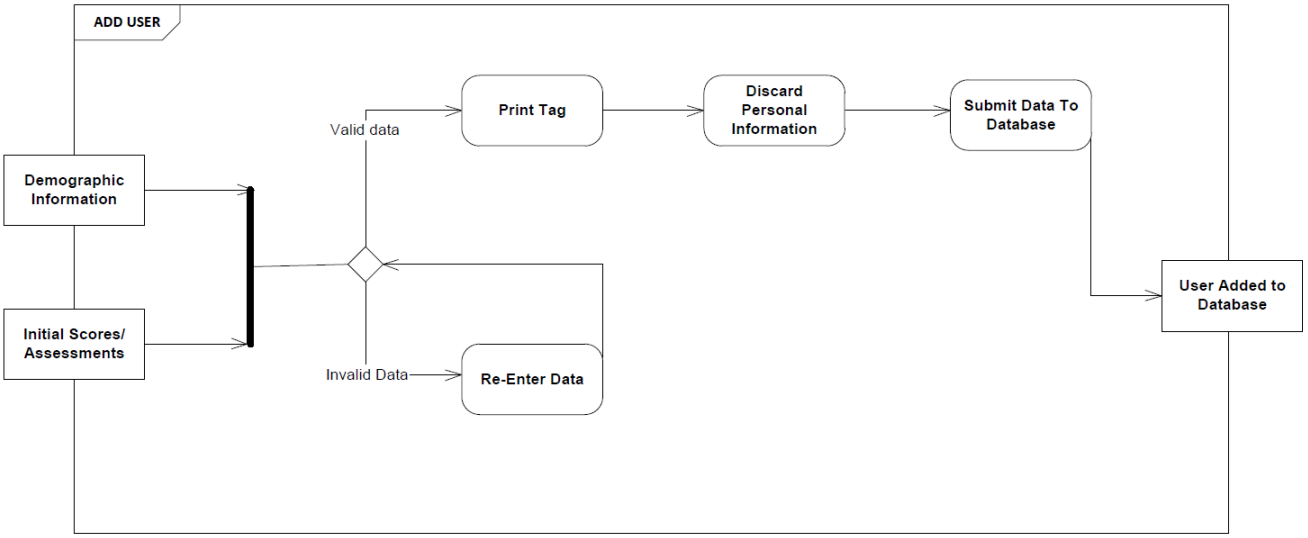
Login



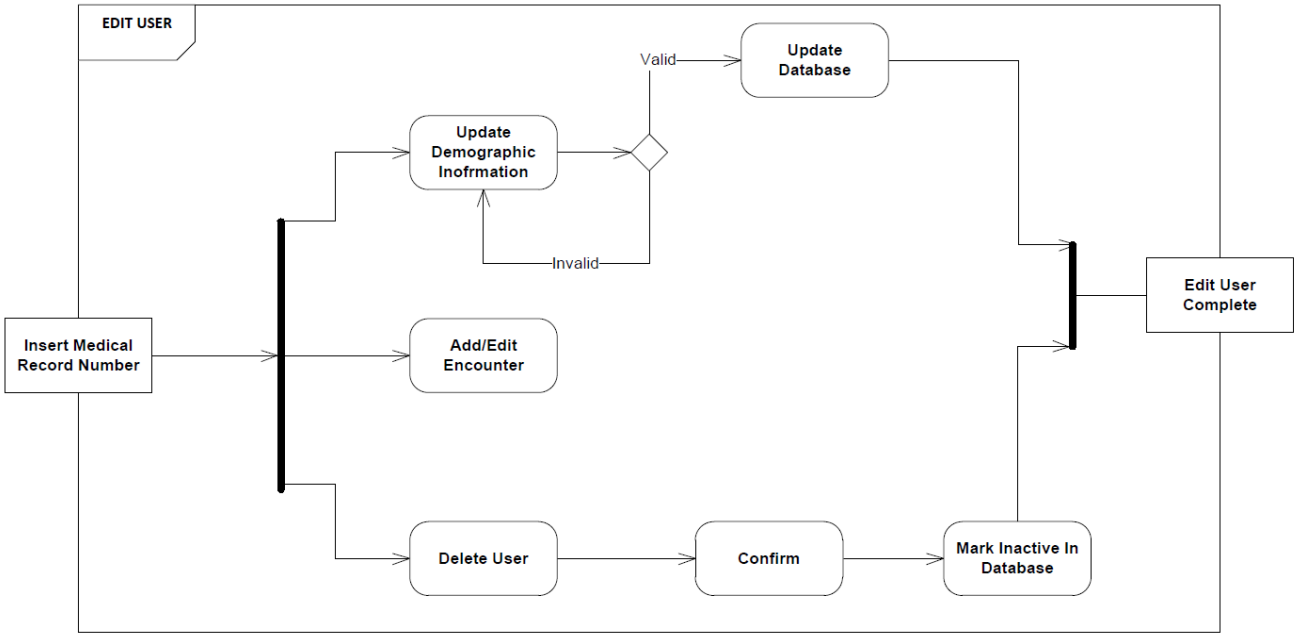
Manage Users



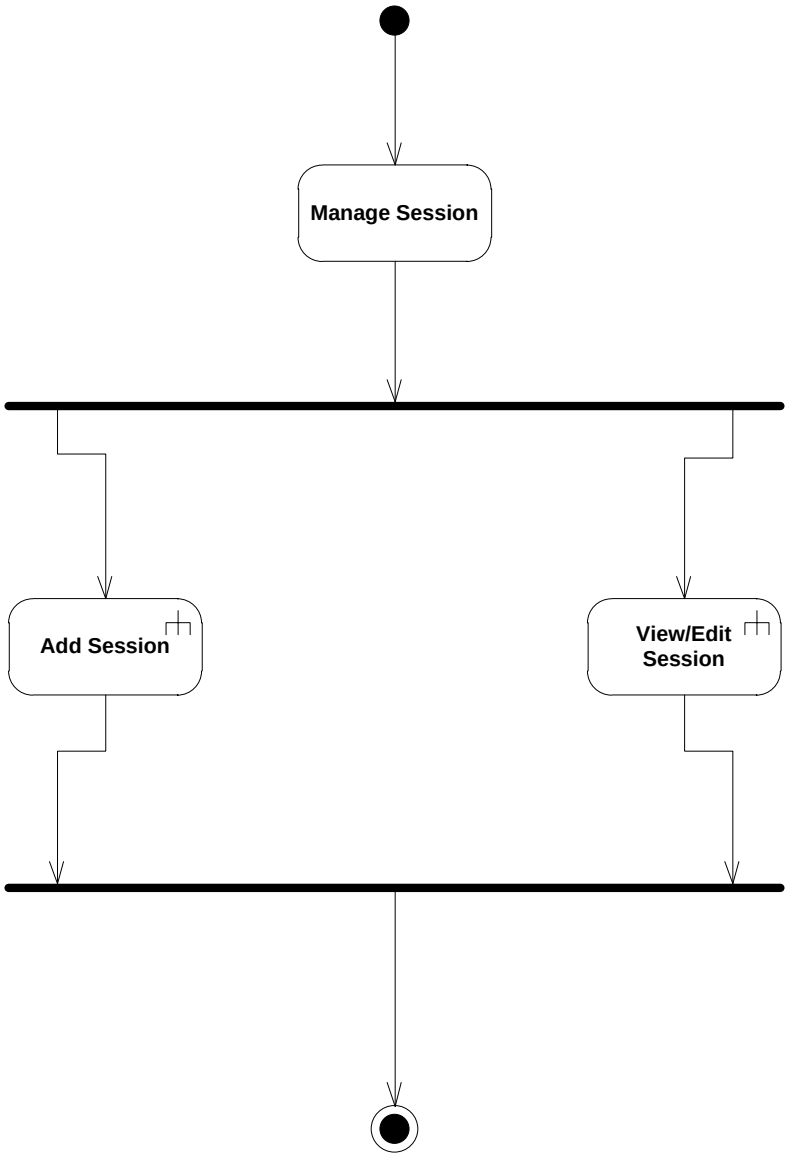
Add User



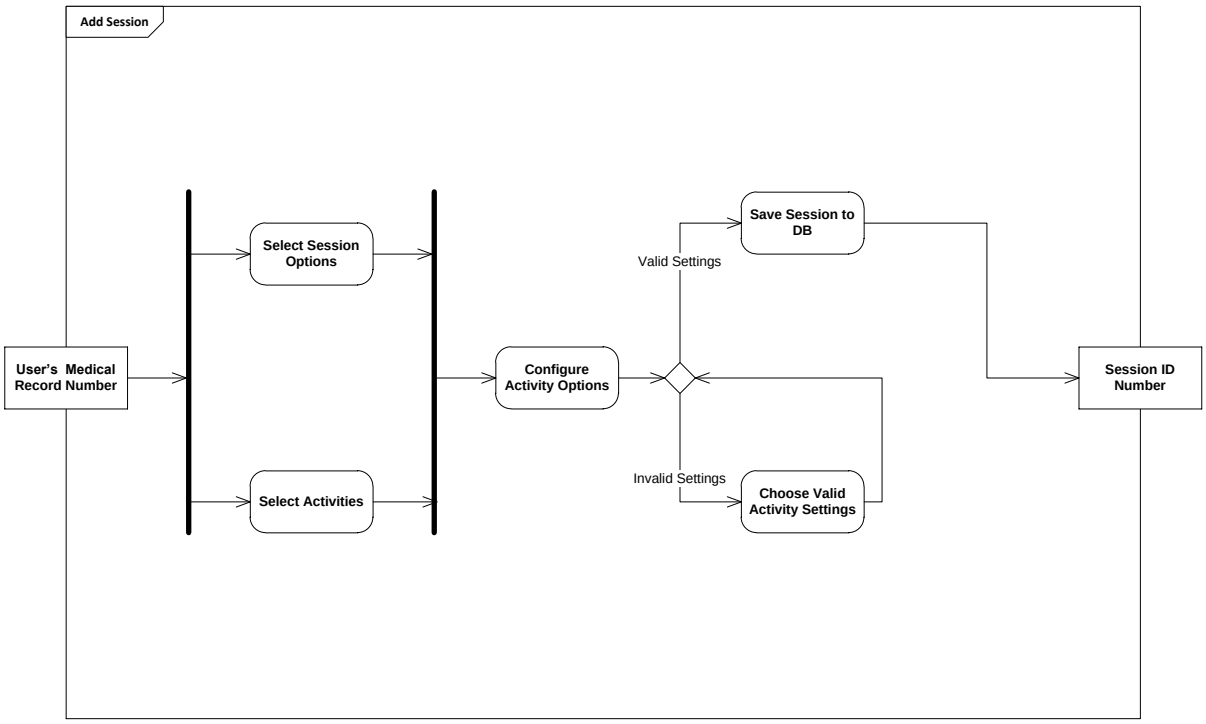
Edit User



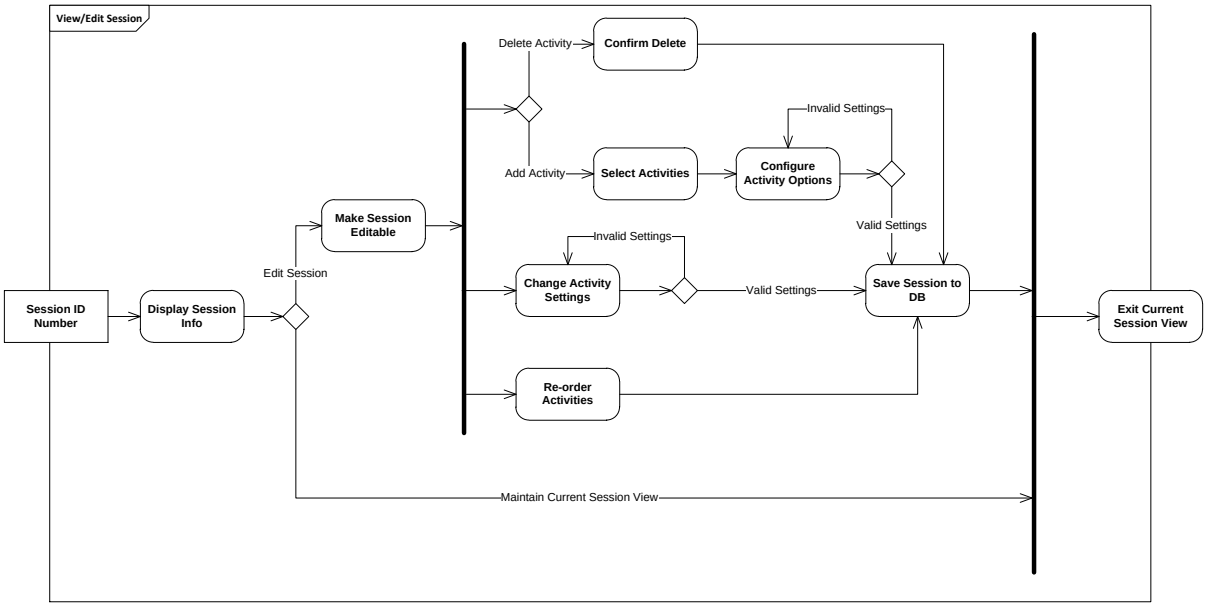
Session



Add Session

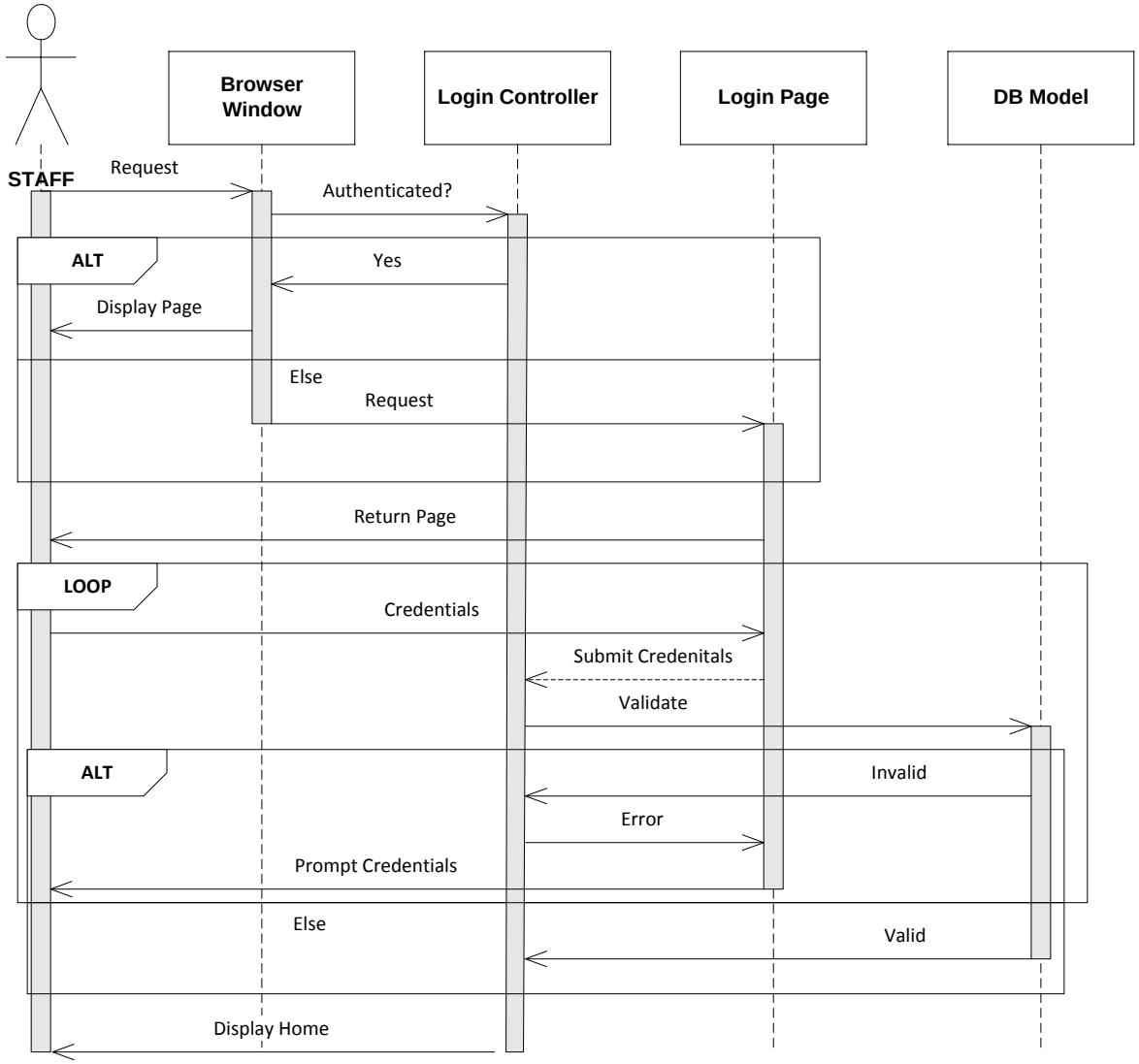


View/Edit Session



7.2. Sequence diagrams

Staff Login



7.3. Web Application Components

- User Management
  - Add New User
- Session Management
  - Add New Session
  - Edit Session
  - Copy Previous Session
- Report Management
  - Time/Accuracy Reports
  - User Progress Reports
- Administration
  - Add New Employee User
  - Edit Employee User Roles
  - Print Employee User Tag
  - Reprint TheraTouch User Tag
  - Edit TheraTouch User
  - Reset Session In Progress

8. Activity Interface

8.1. Adding an Activity to the Database

To add an activity to the database, insert the name of the activity into the activity table, where it lists all of the playable activities. You must also add all of the activity's options into the activity options table, which lists all of the different options of each activity.

8.2. Adding an Activity to TheraTouch

8.2.1. Preconditions

Before you can add an activity to the framework, it must extend the activity class and must contain a create method, which will be called when the activity needs to be created. If the activity satisfies these conditions, it can be added to the framework.

8.2.2. Adding the Activity to the Framework

To add an activity, first the activity needs to be included in the project folder. Once it's there, the name of the activity (its name in the activity table) must be added as a new case to the switch in the launch activity method, which resides in the session controller class. The updated TheraTouch will then need to be redeployed to the Surface.

8.3. Adding an Activity to TheraLink/Database

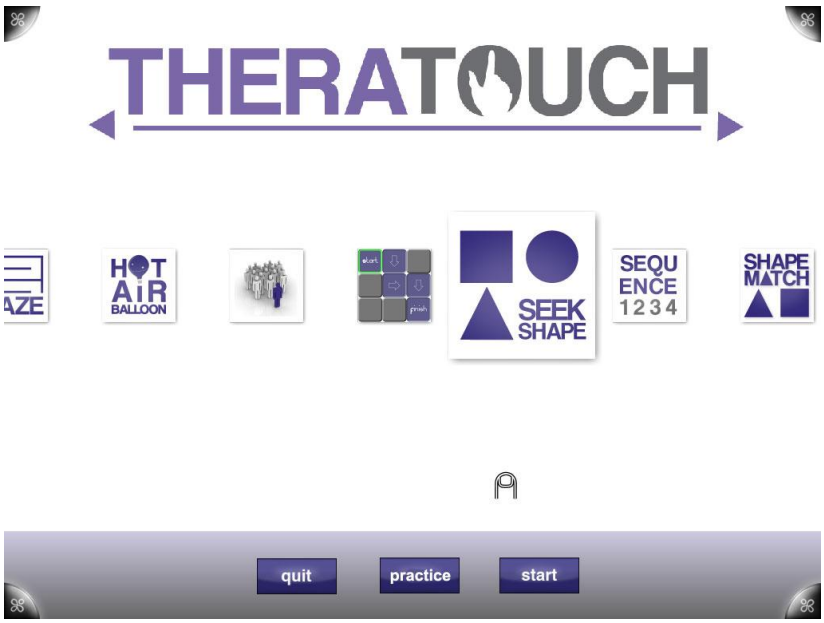
Activities do not need to be added to TheraLink, apart from the creation of custom reports if applicable. To add an activity to the database, a record needs to be added to the Activity Table. For each option the activity will use, a record must be added to the ActivityOptionList table. For each possible option value for the options, a record must be added to the ActivityOptionValuesEnumerated table. After these three tables have been updated, the activity will be able to be added to a session with its options in TheraLink.

9. User Interface

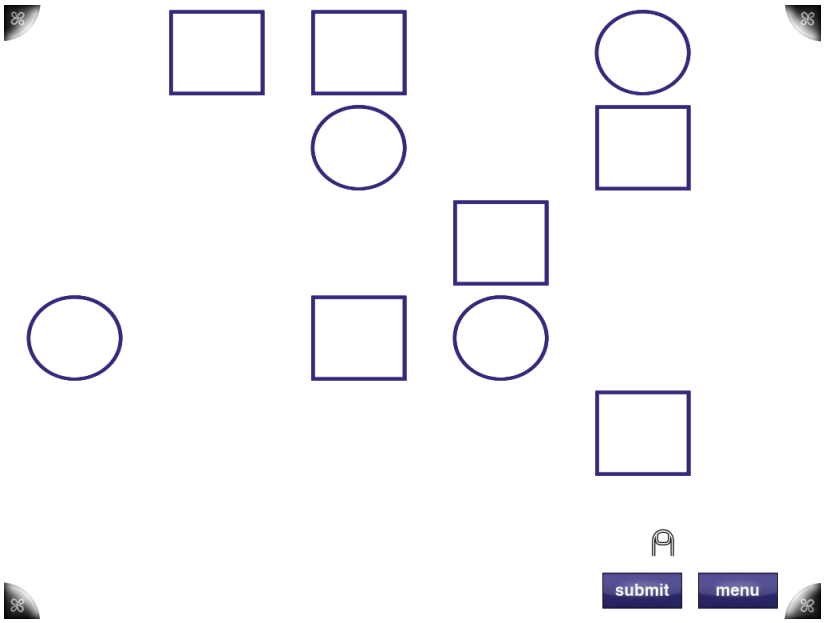
9.1. Microsoft Surface

- Freeplay Button → FP_1
- Valid User/Patient Surface Tag = Login → S_1

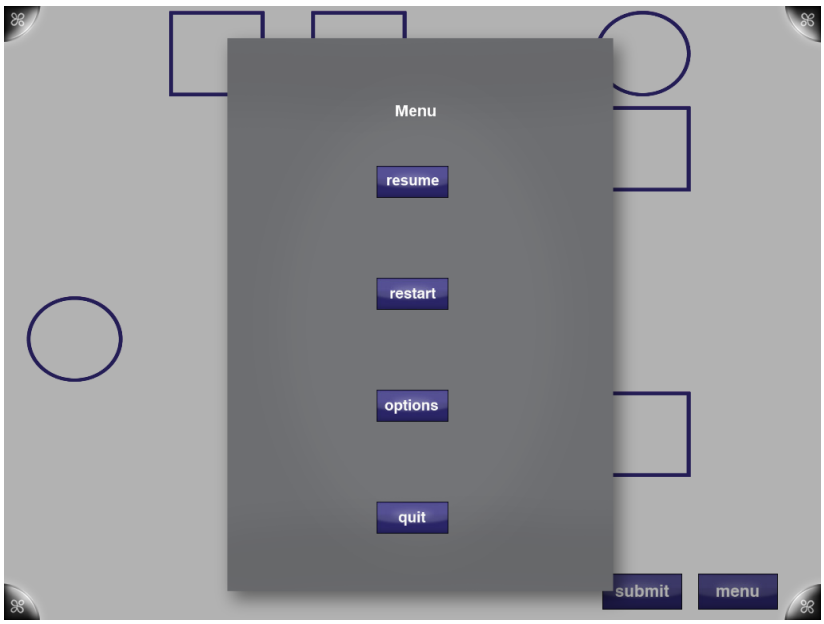
- Select Activity → Press start Button
- start Button → FP_2
- quit Button → MM_1



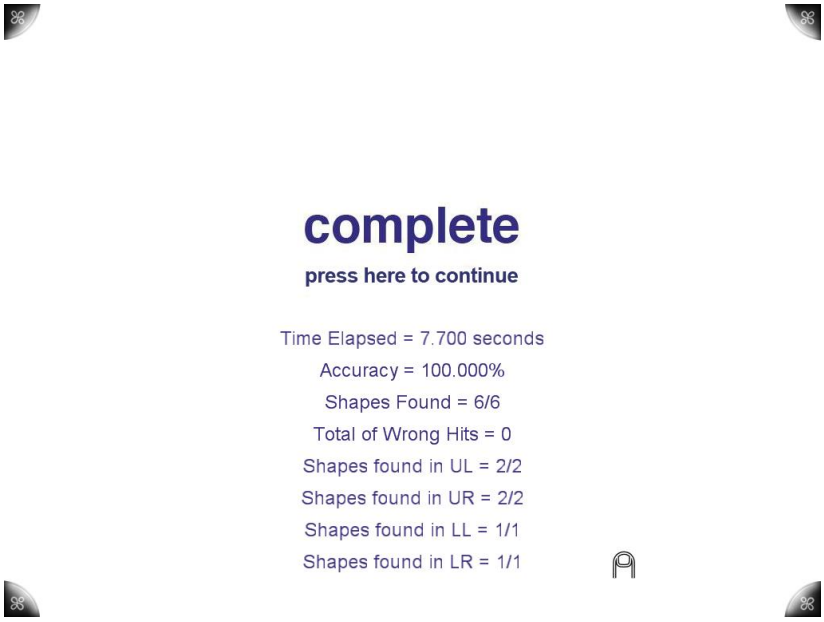
- Select Activity → Press Practice Button or Launch Button
- practice Button → S_2
- start Button → S_3
- quit Button → MM_1



- Activity Finishes → FP_1
- menu Button → Pauses activity and menu appears → FP_3
- submit Button →goes to complete screen

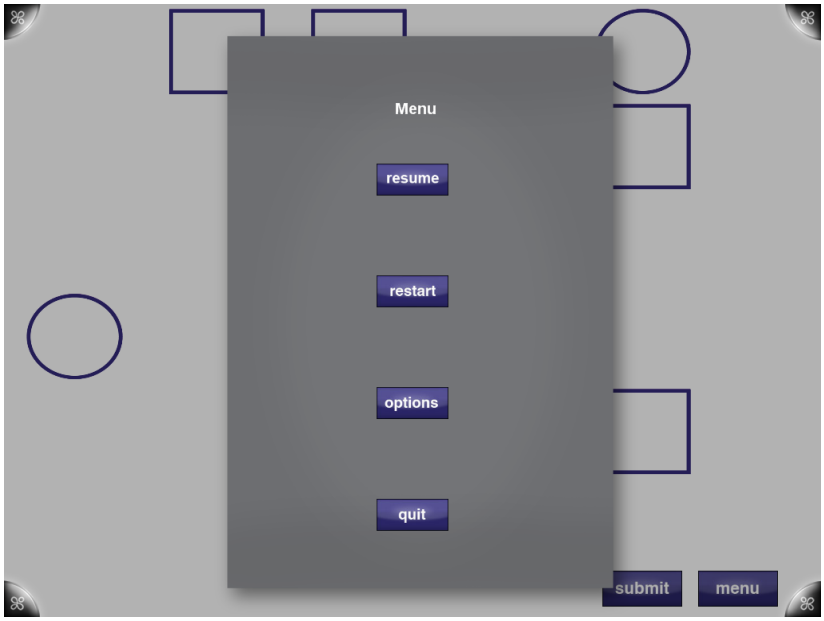


- resume Button → Starts activity from point when Menu button pressed
- restart Button → Restarts the current activity
- quit Button→ FP_1



- Data stored in database once activity completes
- Staff Therapist Surface Tag → Pauses activity and menu appears → S_4

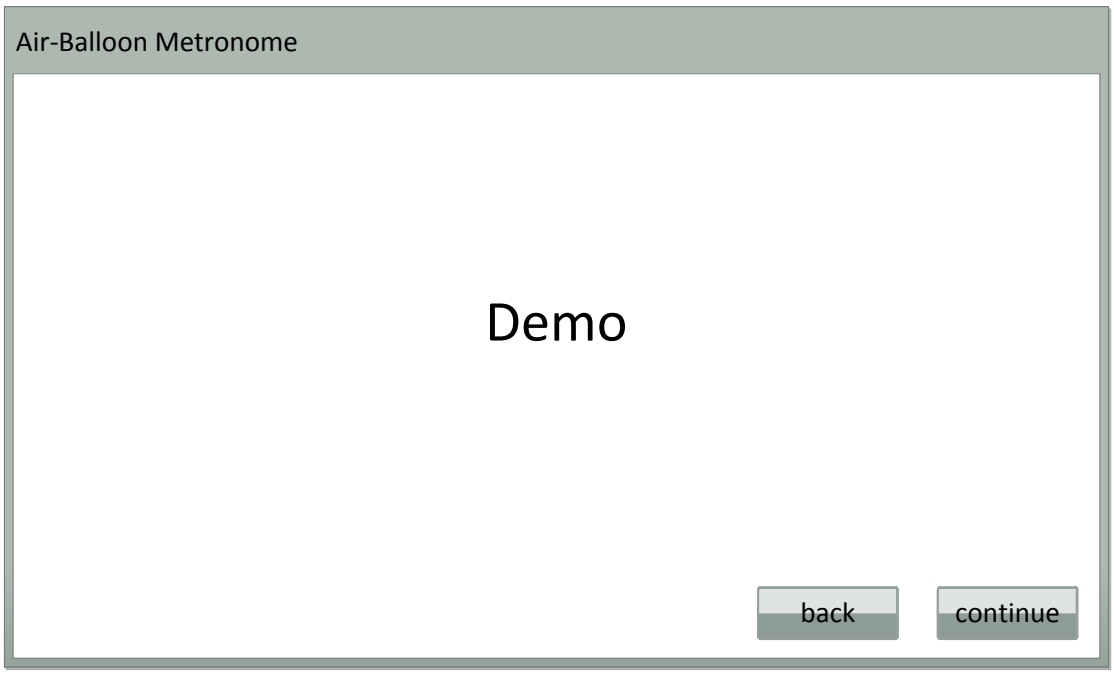
- No data stored in database during practice mode
- quit Button → S_1

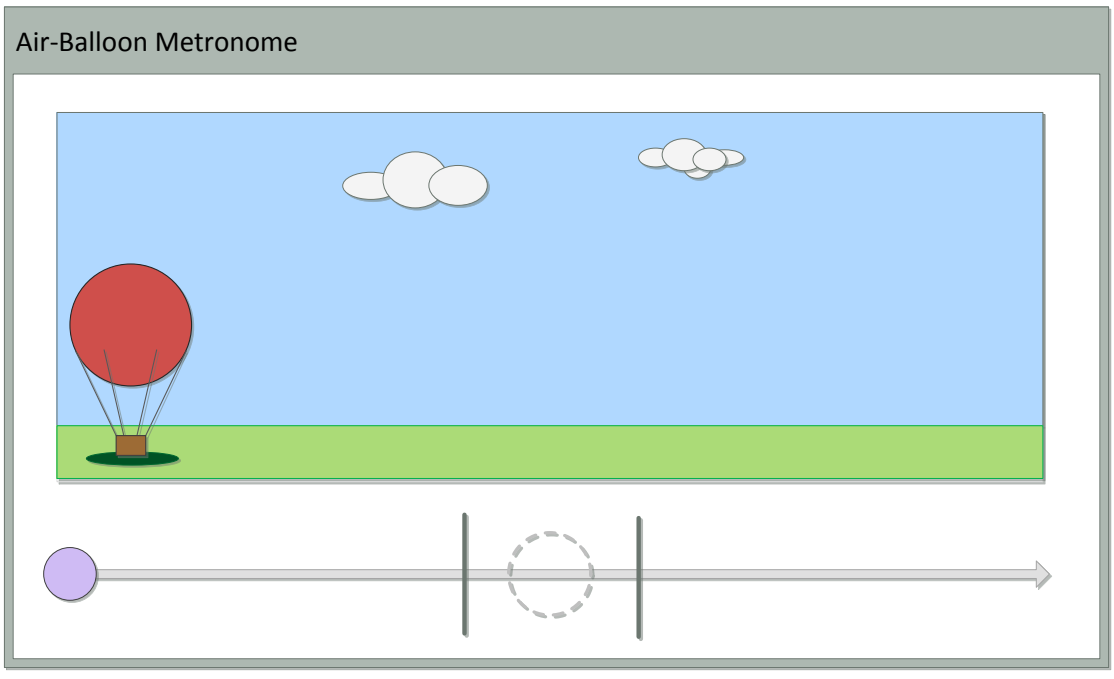


- resume → Starts activity from point when Menu button pressed (S_3)
- restart → Restarts the current activity (wipes collected data for that specific instance of activity to start fresh)
- quit → S_1

9.2. Activity Prototypes

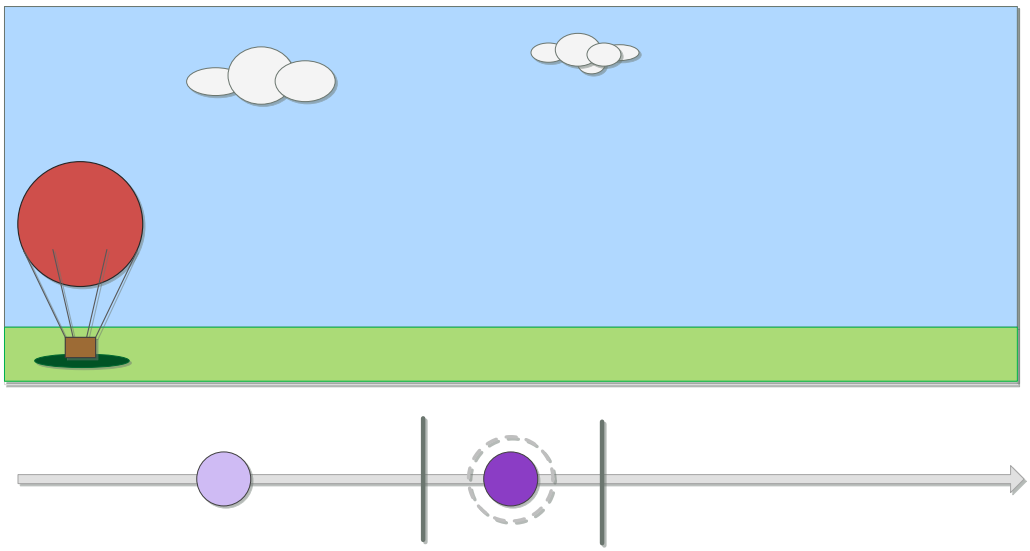
9.2.1. Air Balloon Metronome





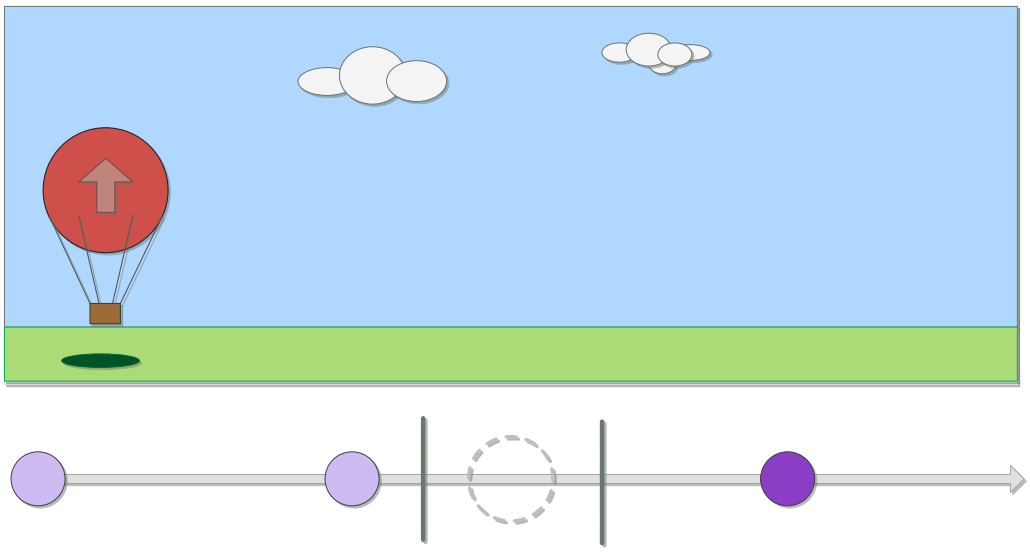
- This is a Interactive Metronome activity, its is made up of a mini video game (top window) that reflects the user's input and the metronome bar (bottom)
- When the activity starts, the pace of the metronome is represented by circles which move across the bar

Air-Balloon Metronome



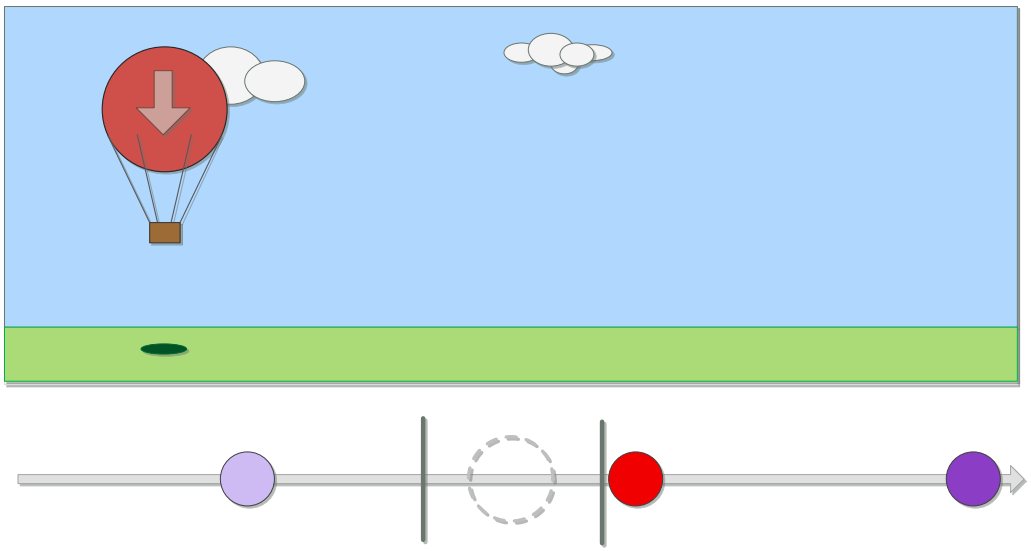
- The goal is to tap on the circles when they move within “Target Zone” the dashed circle in the middle of the bar

Air-Balloon Metronome



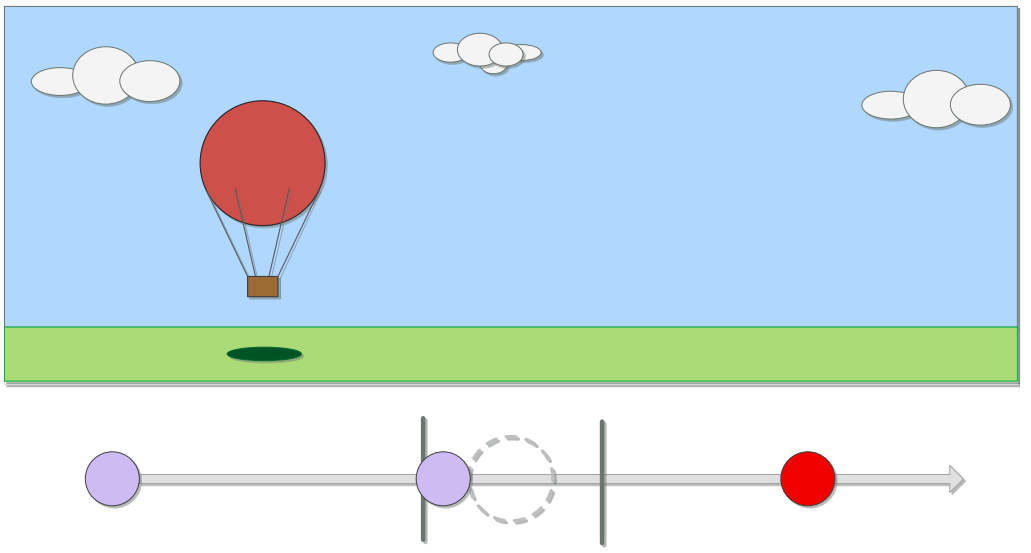
- When the user taps/presses the “Target Zone” in-sync with the pace/”circles” the hot air balloon takes off/increases in elevation

Air-Balloon Metronome



- When the user misses the pace or presses the “Target Zone” too early, the hot air balloon decreases in elevation or lands on the ground if low enough.

Air-Balloon Metronome

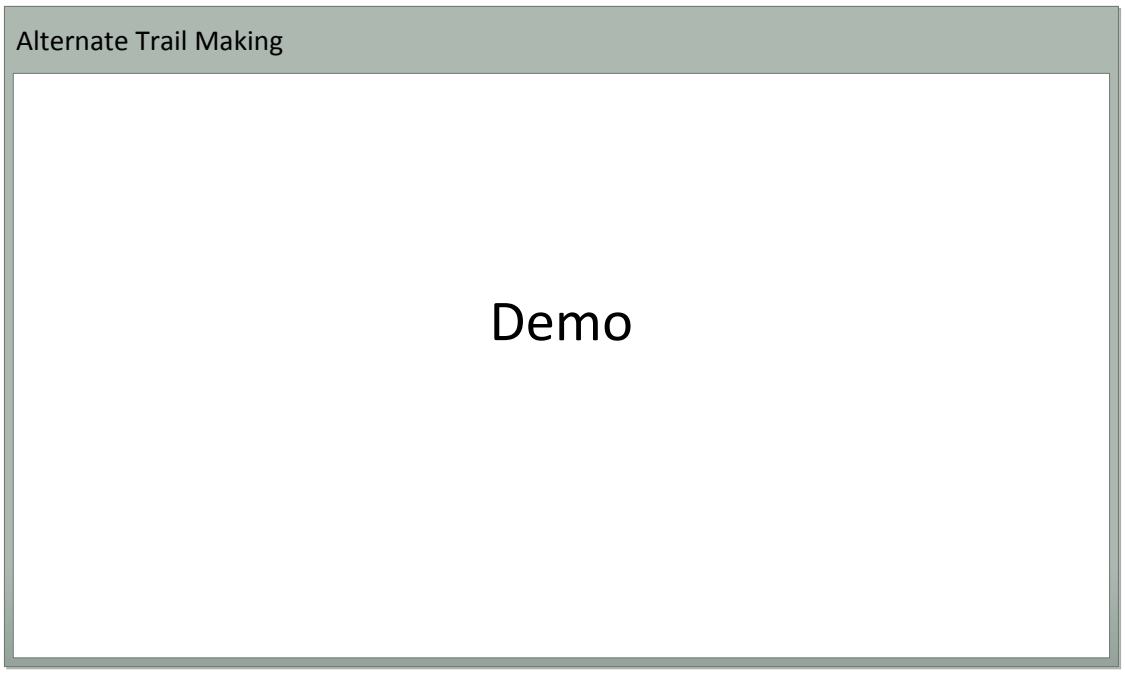


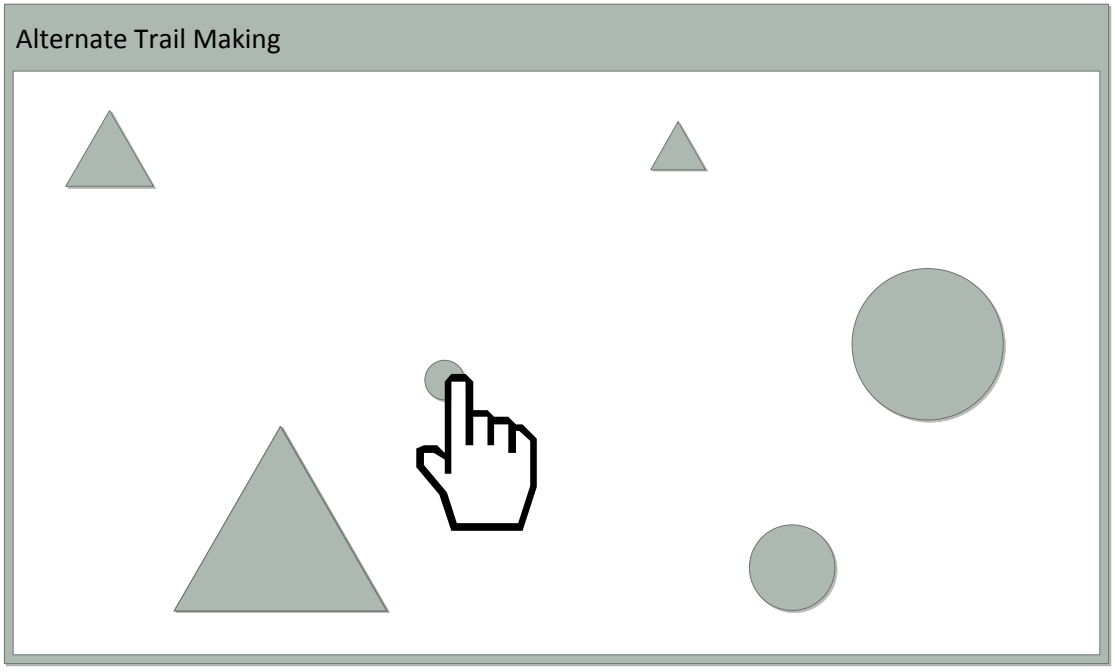
- Metronome pace, length of activity, and other options can be defined in the activity options using TheraLink

Air-Balloon Metronome

- The activity ends when the time (duration) option that was selected is reached

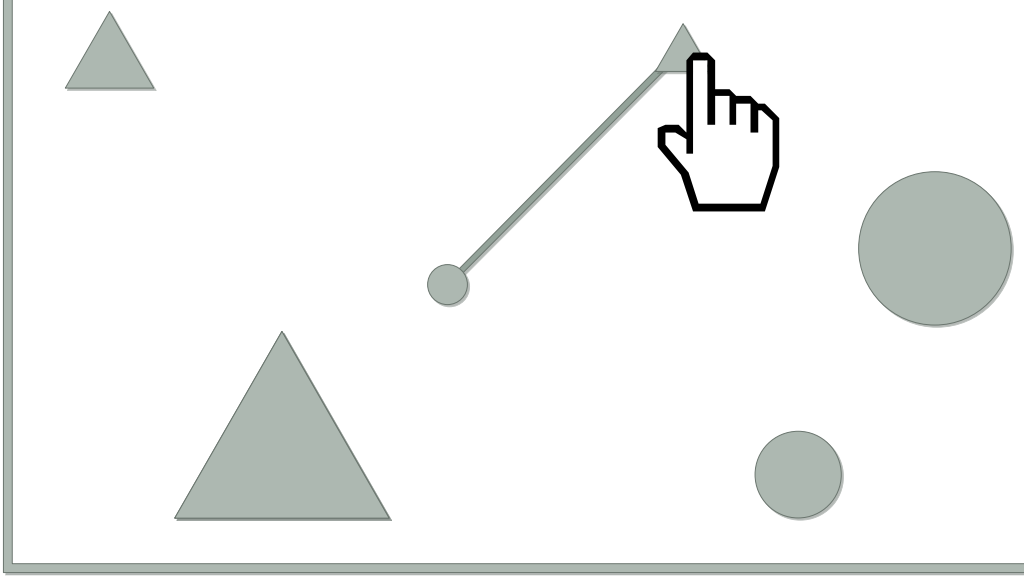
9.2.2. Alternate Trail Making





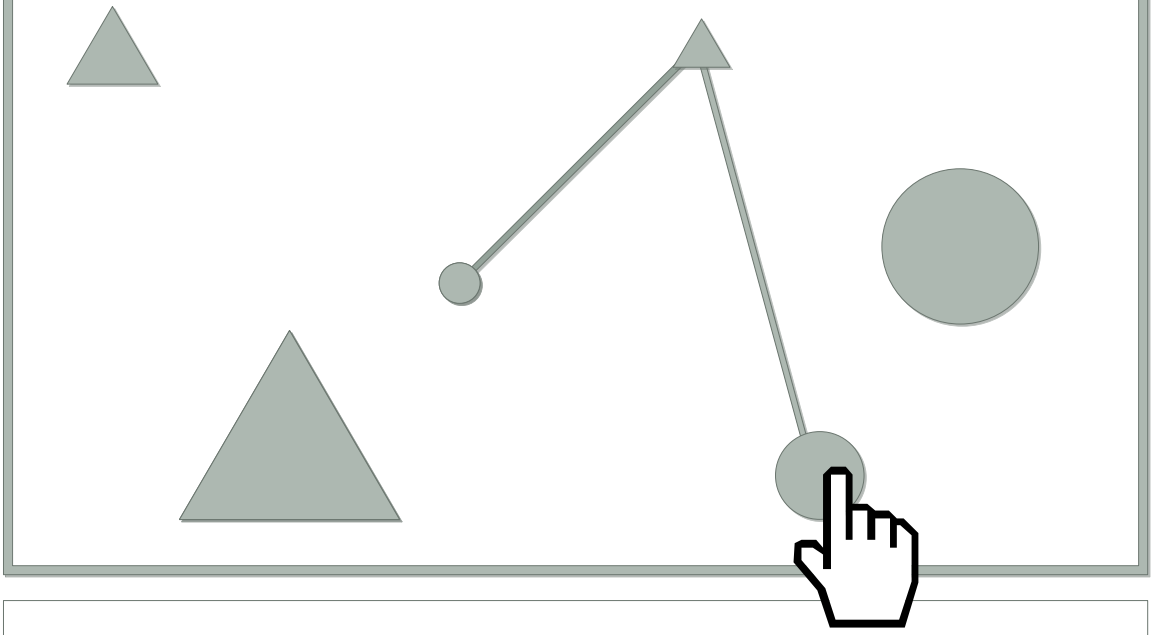
- Shapes appear on screen
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

Alternate Trail Making



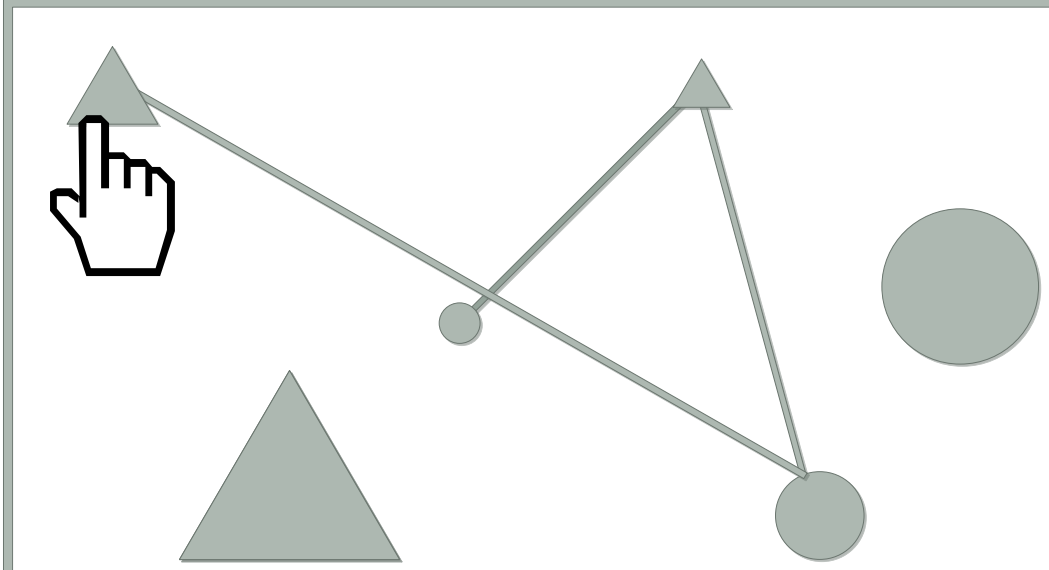
- Shapes stay on screen until all shapes have been selected
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

Alternate Trail Making



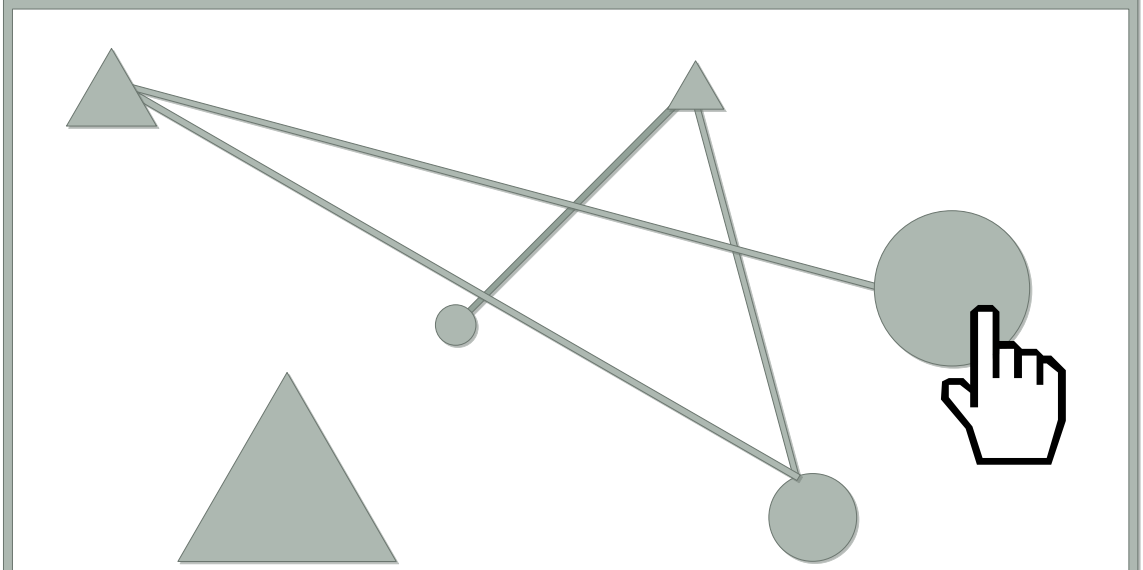
- Shapes stay on screen until all shapes have been selected
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

Alternate Trail Making



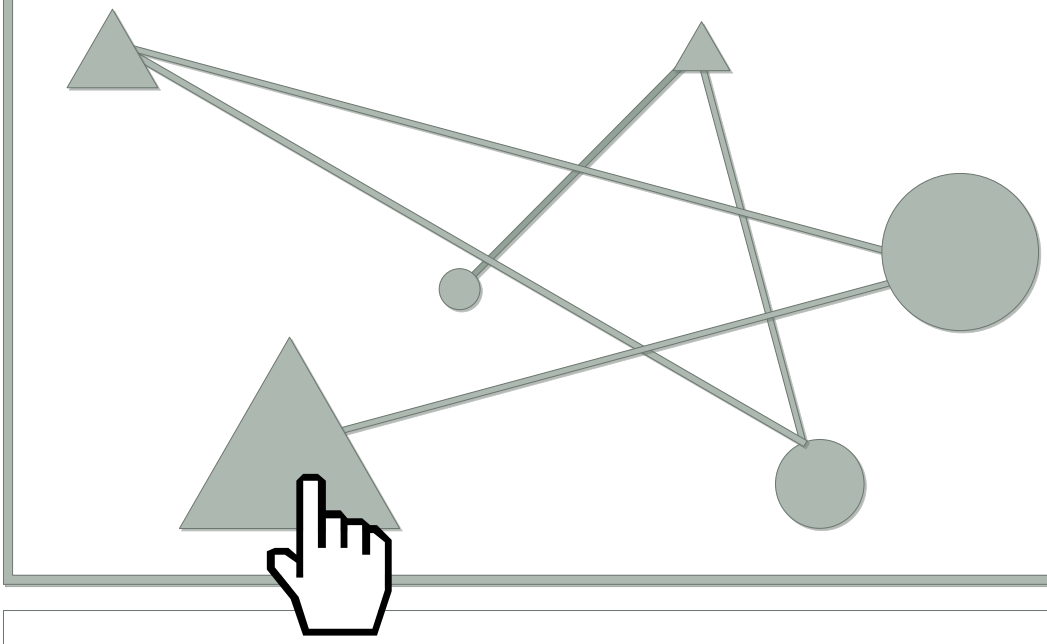
- Shapes stay on screen until all shapes have been selected
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

Alternate Trail Making



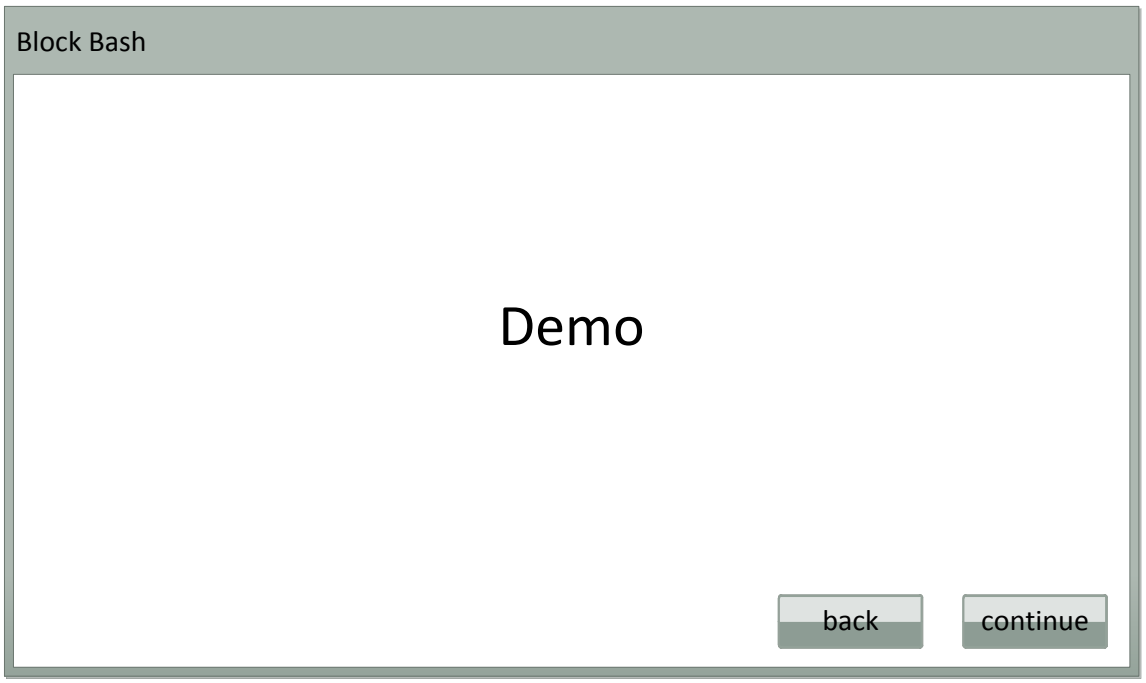
- Shapes stay on screen until all shapes have been selected
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

Alternate Trail Making



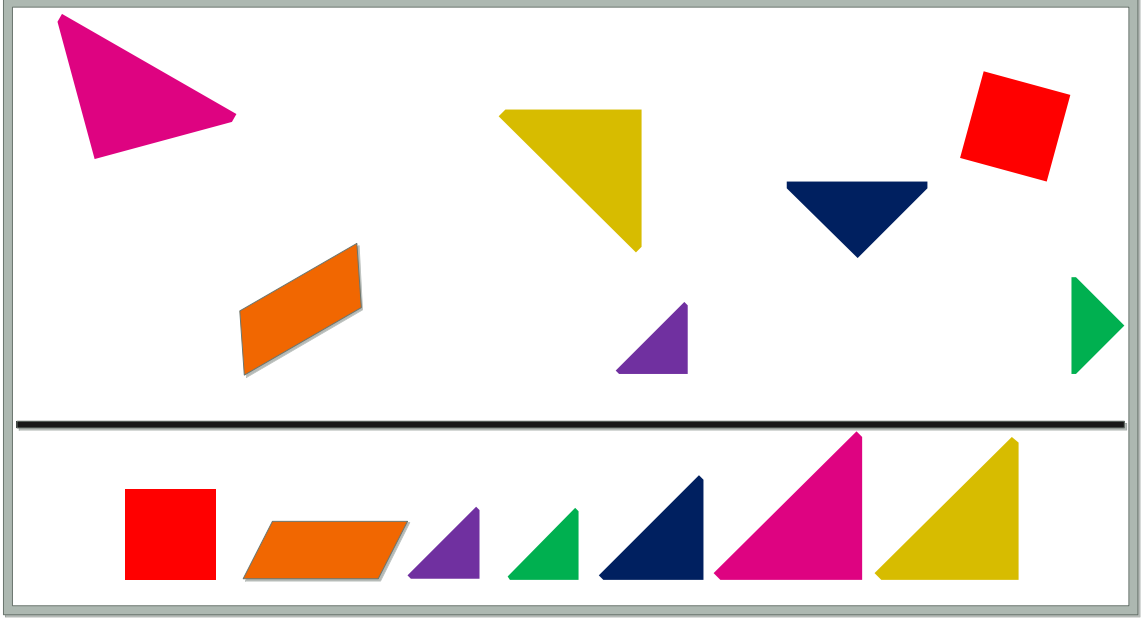
- Shapes stay on screen until all shapes have been selected
- User must draw a line/connect small circle, then small triangle, then medium circle, then medium triangle, then large circle, then large triangle

9.2.3. Block Bash



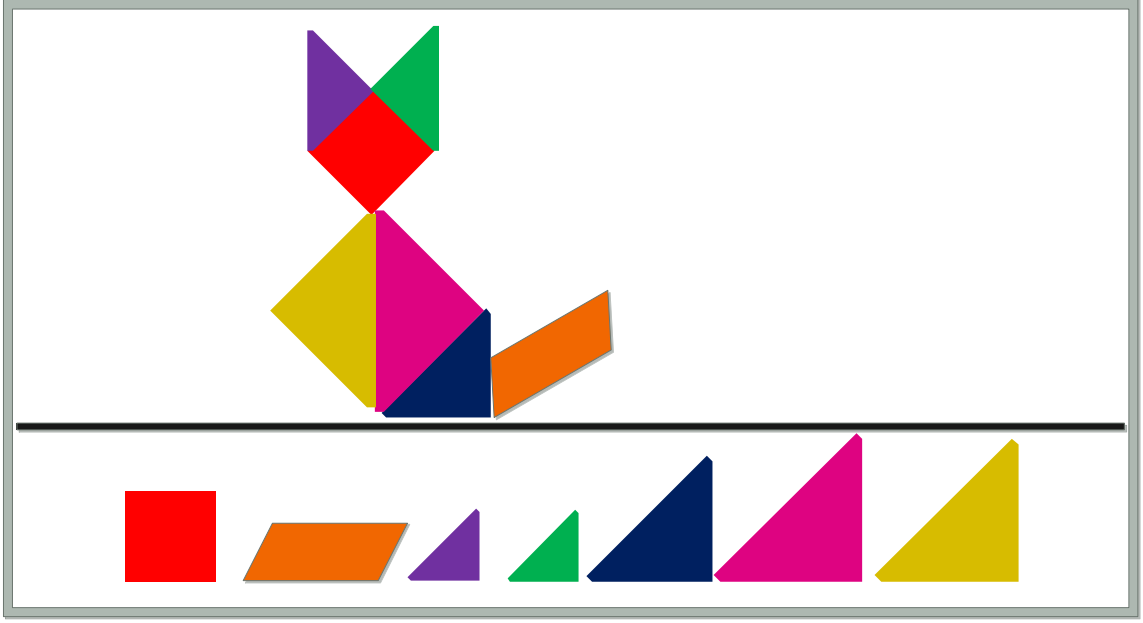
- Bottom row of shapes are placeholders for 3-D wooden blocks (each colored accordingly with tags for Microsoft Surface recognition)
- The following screens describe 3 different levels of this activity. Level will be provided based off of level selection by therapist in TheraLink (web application)

Block Bash - Easy



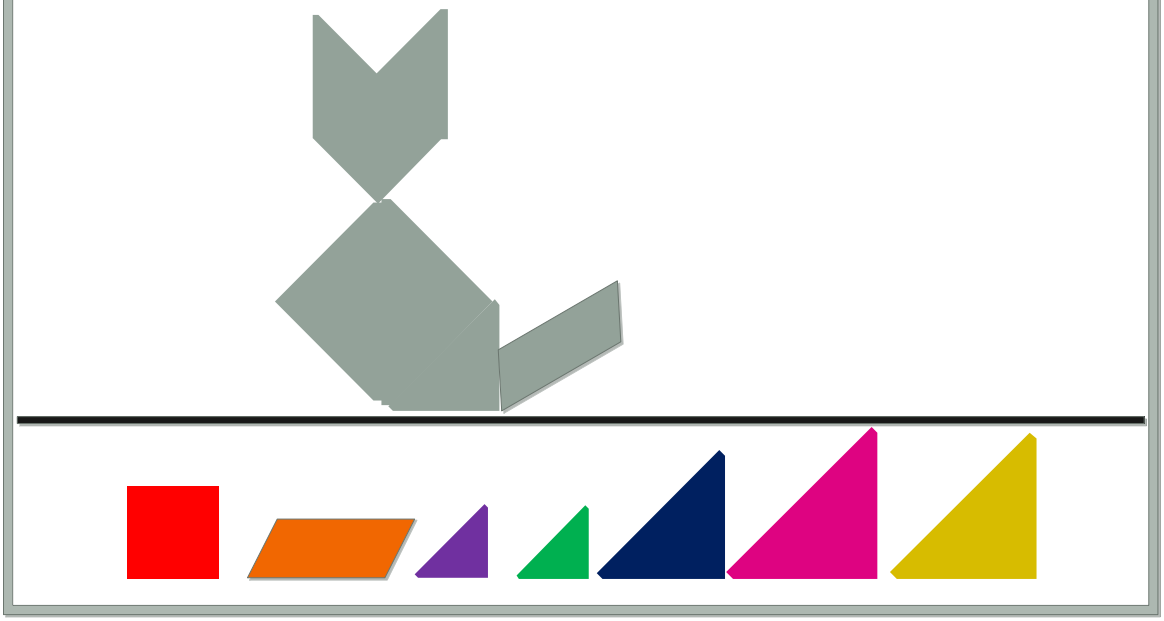
- Easy level – shapes appear on the screen in random location and orientation
- User must place block on top of matching shape (color and style)

Block Bash - Medium



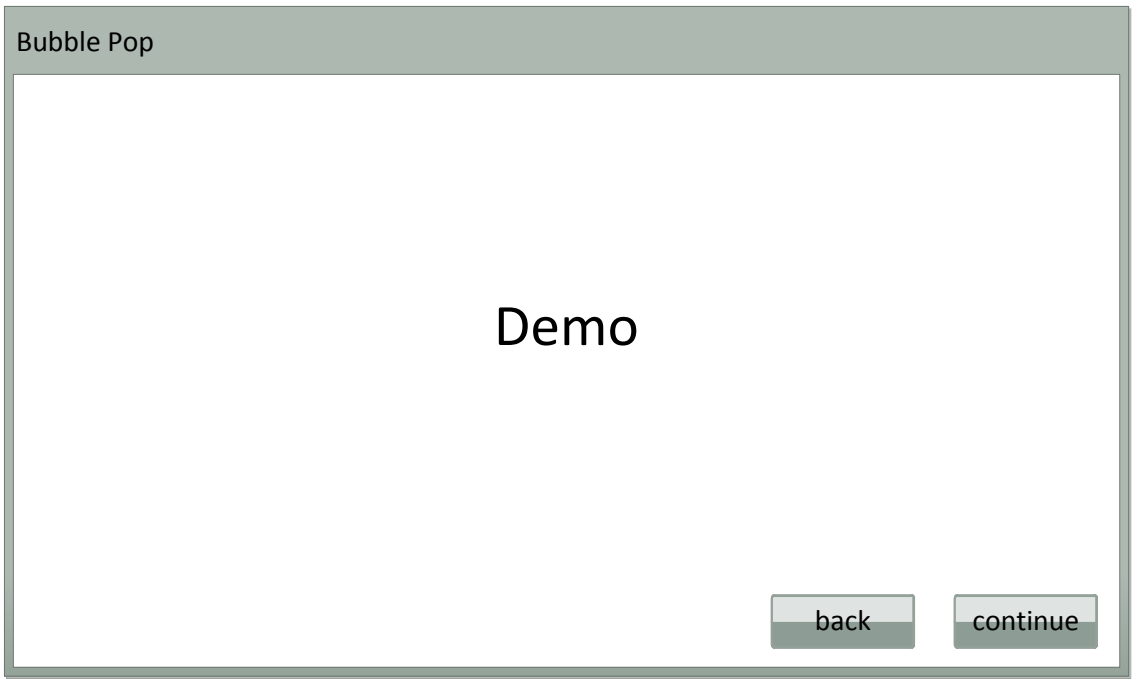
- Medium Level – tanagram appears on the screen; tanagram is in color for matching
- User must place block on top of matching shape (color and style)

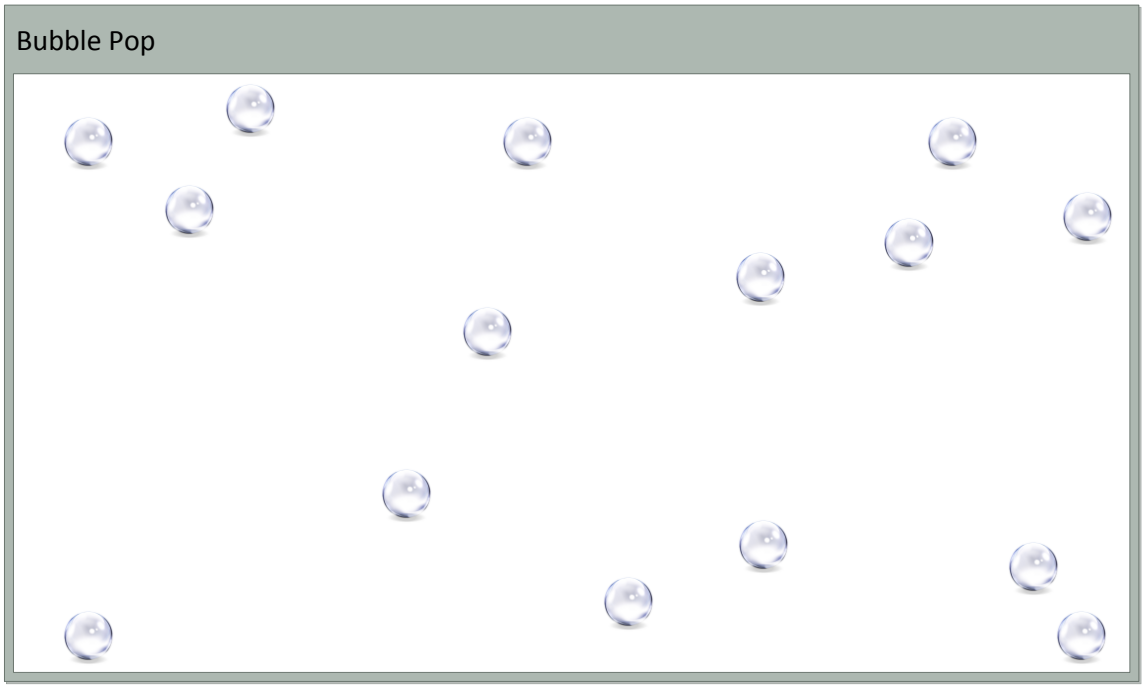
Block Bash - Hard



- Hard Level – tanagram appears on the screen; color has been removed
- User must place blocks to create tanagram on screen

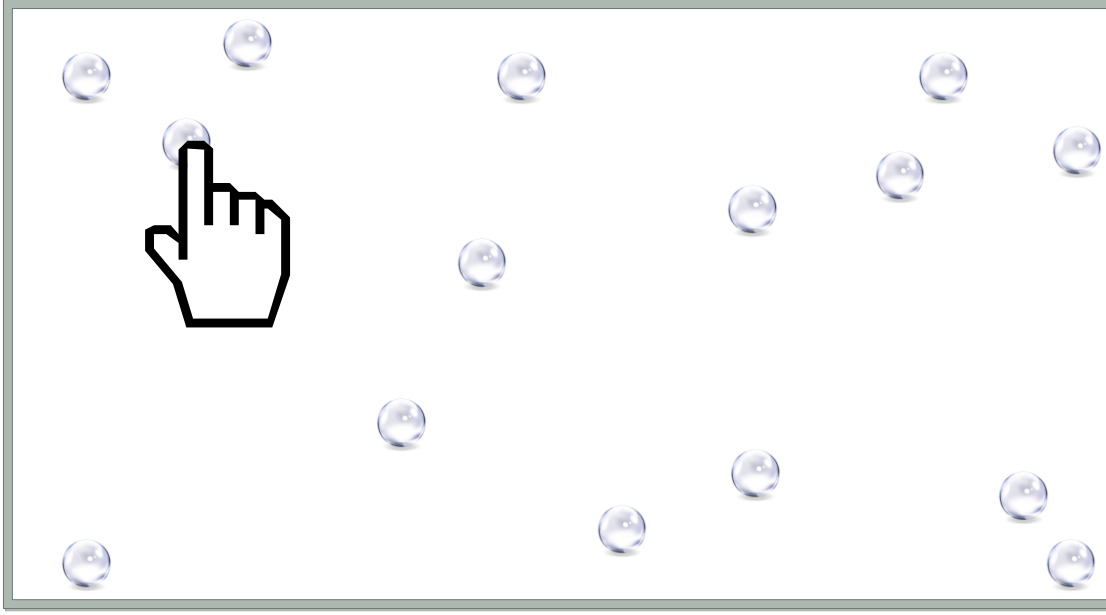
9.2.4. Bubble Pop





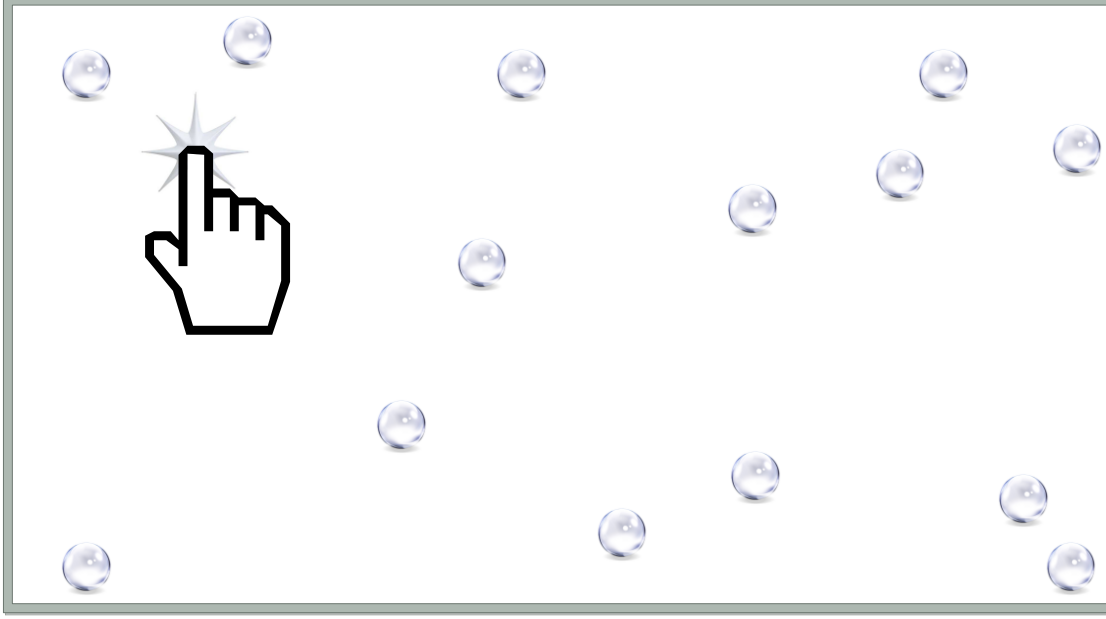
- Bubbles will enter screen from all sides, and will remain on screen until popped
- Bubbles will be constantly moving/bouncing against each other and edges of screen
- Number of bubbles displayed & size of the bubbles defined in level chosen by therapist in TheraLink (web application)

Bubble Pop



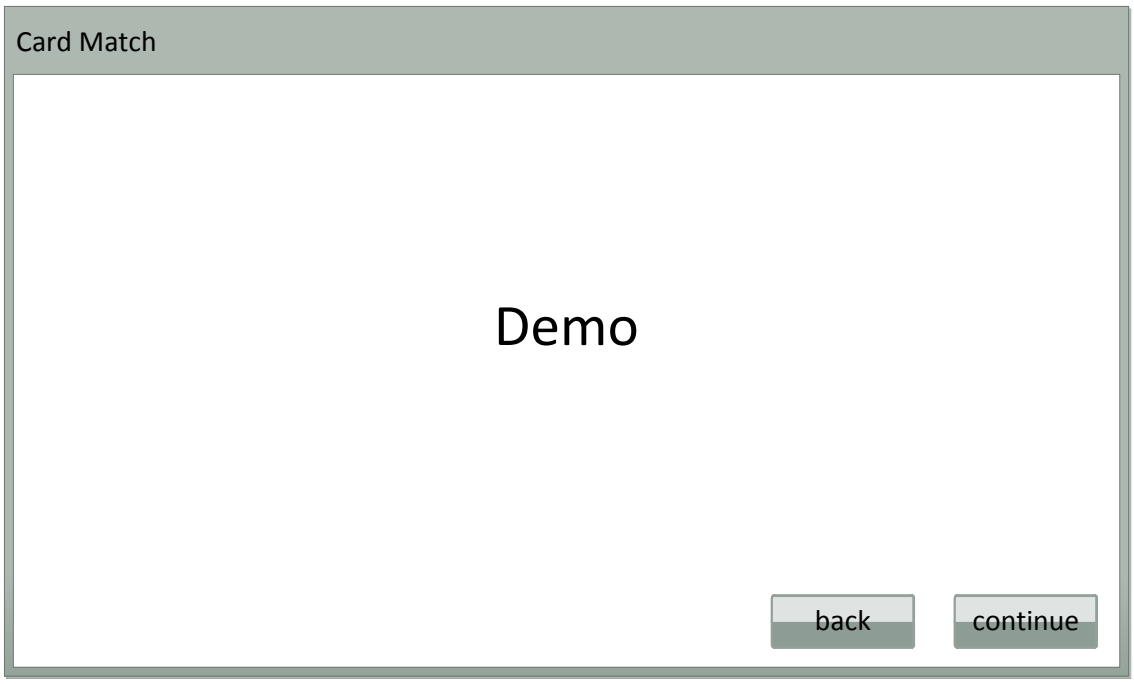
- User must “pop” bubbles by touching a bubble

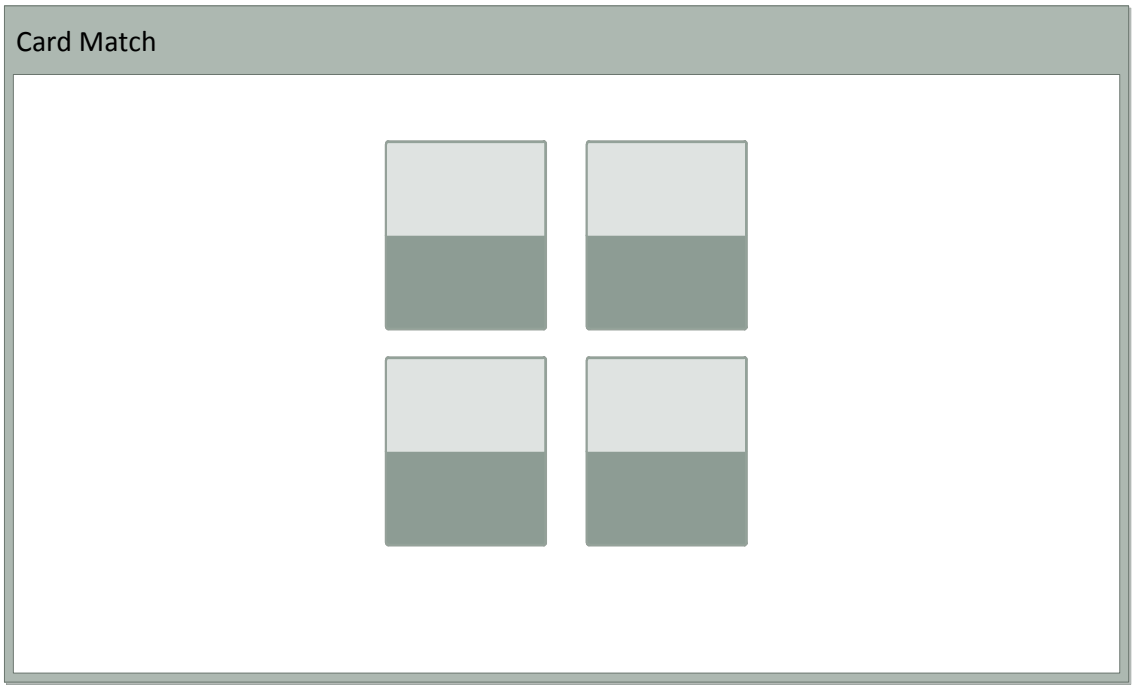
Bubble Pop



- Bubble will pop on contact
- Activity completes when all bubbles on screen have been popped

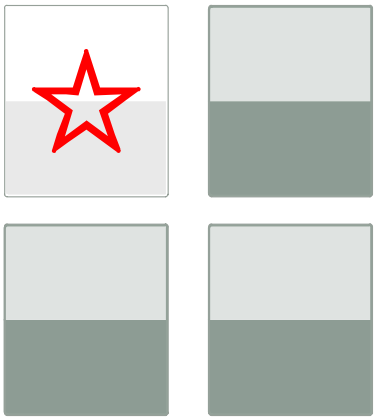
9.2.5. Card Match





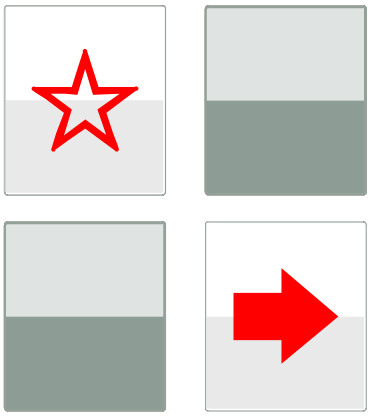
- # of cards specified in Staff Application
- User selects one card

Card Match



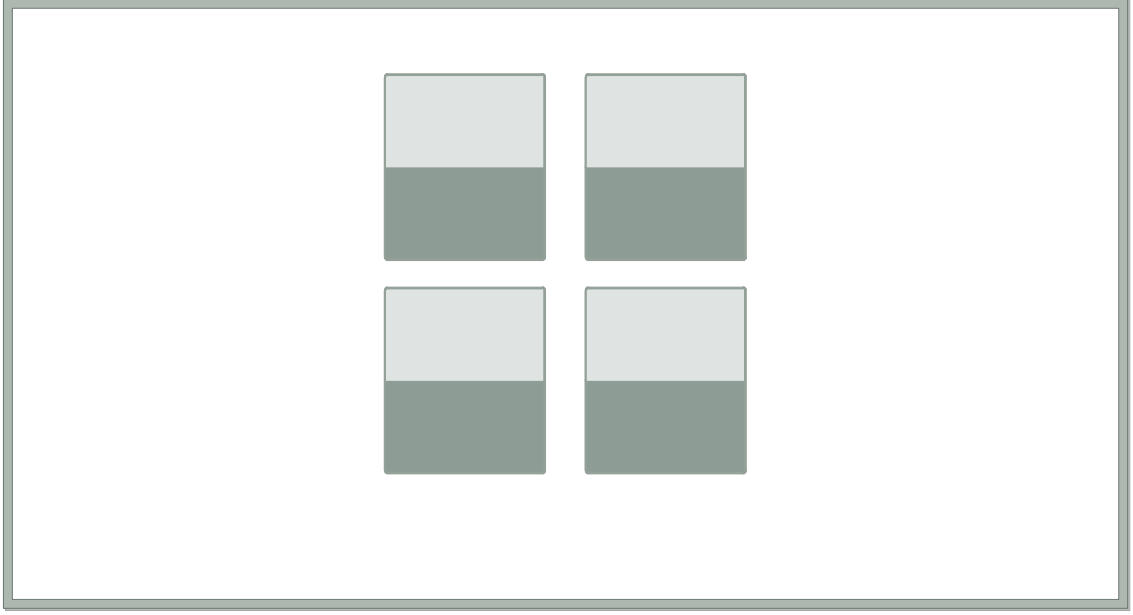
- Card image stays displayed while user selects another card

Card Match



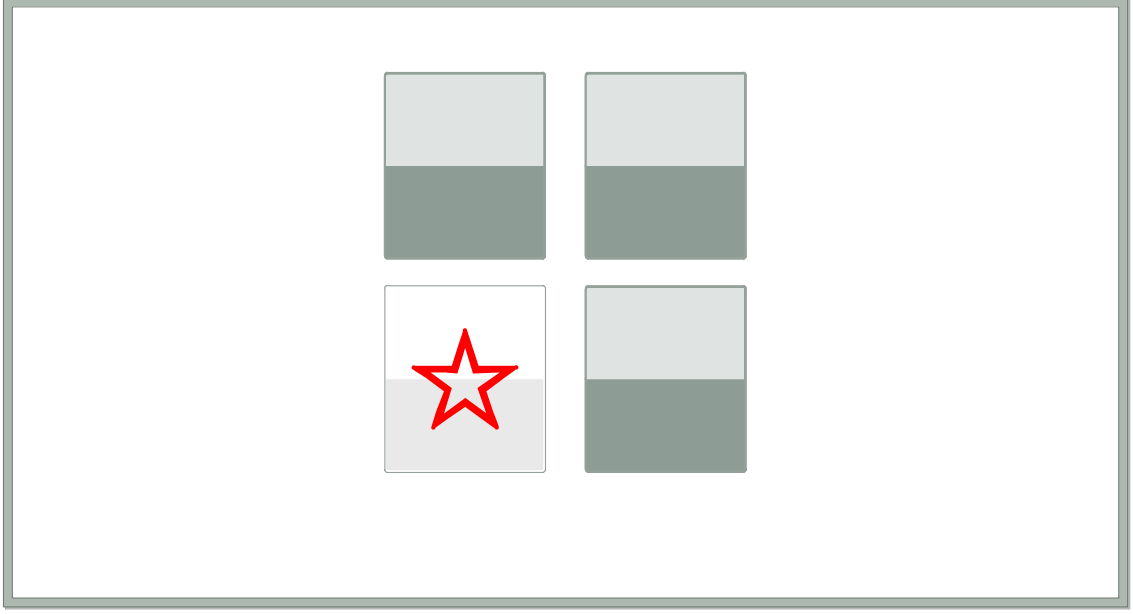
- Cards do not match

Card Match



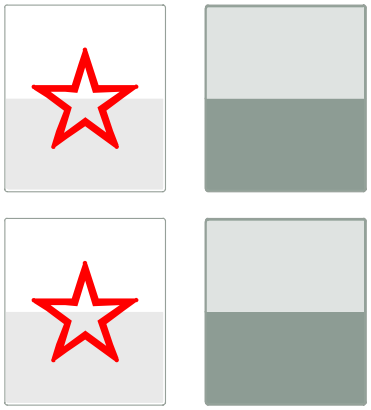
- User must try again
- User selects one card

Card Match



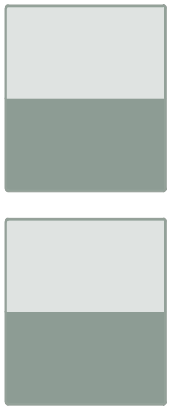
- Card image stays displayed while user selects another card

Card Match



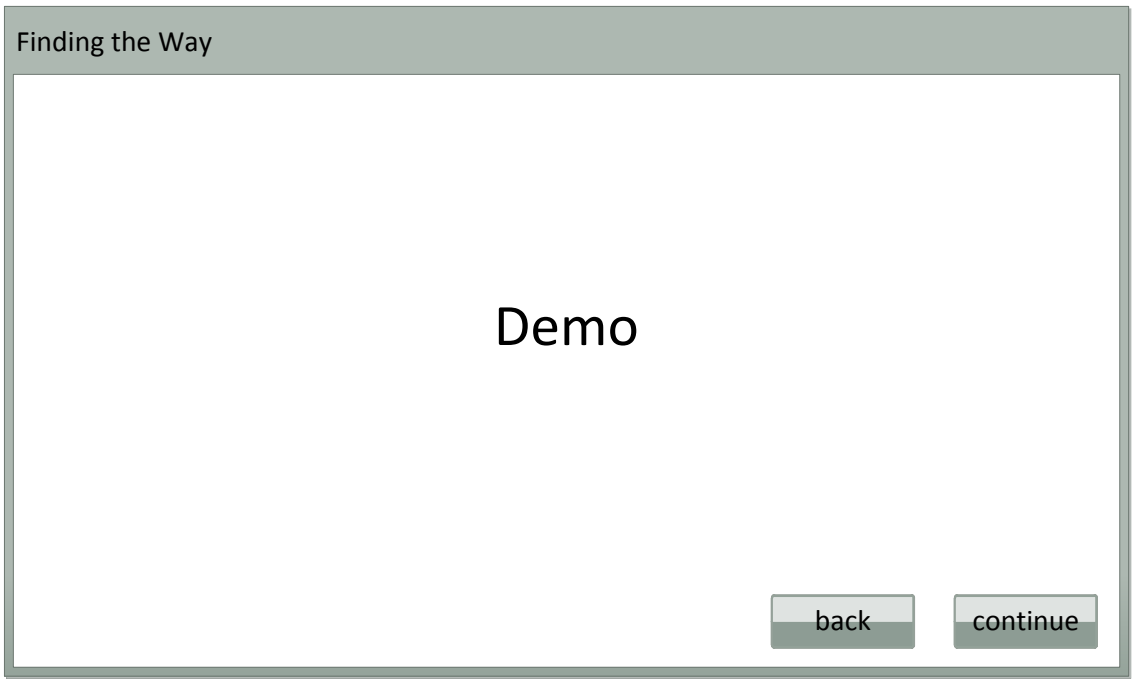
- Match Found!

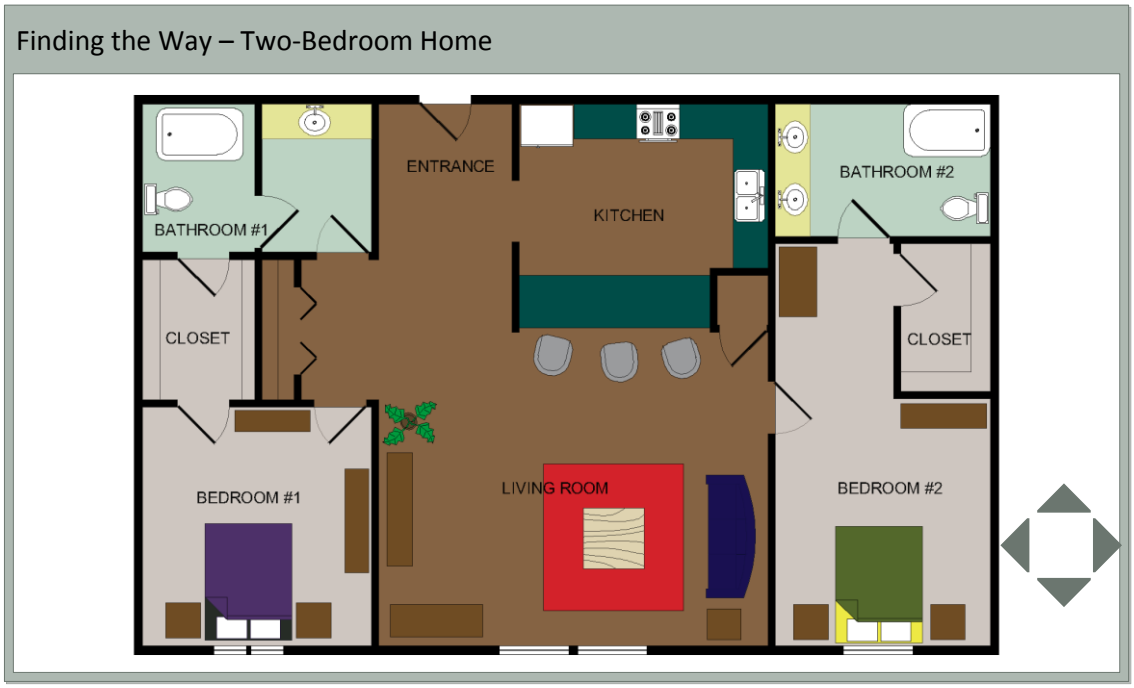
Card Match



- Matching cards disappear
- User must select another card

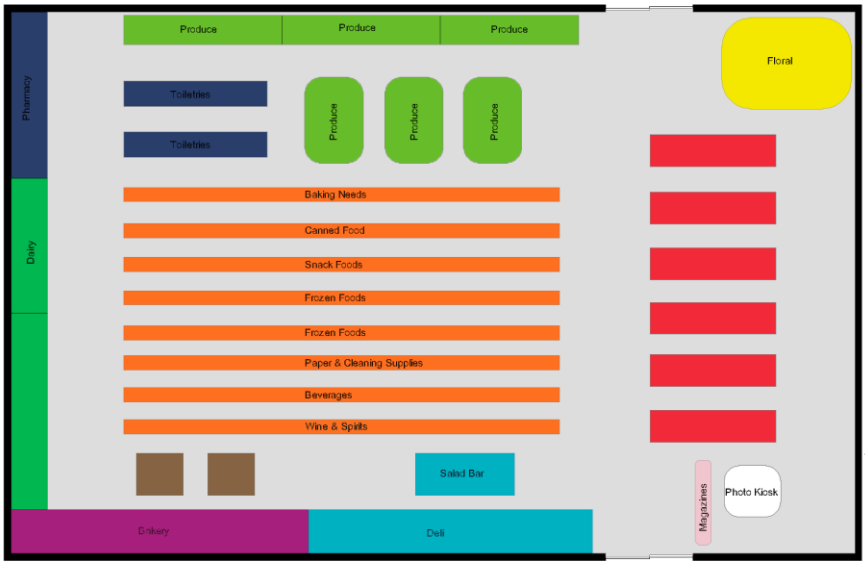
9.2.6. Finding the Way





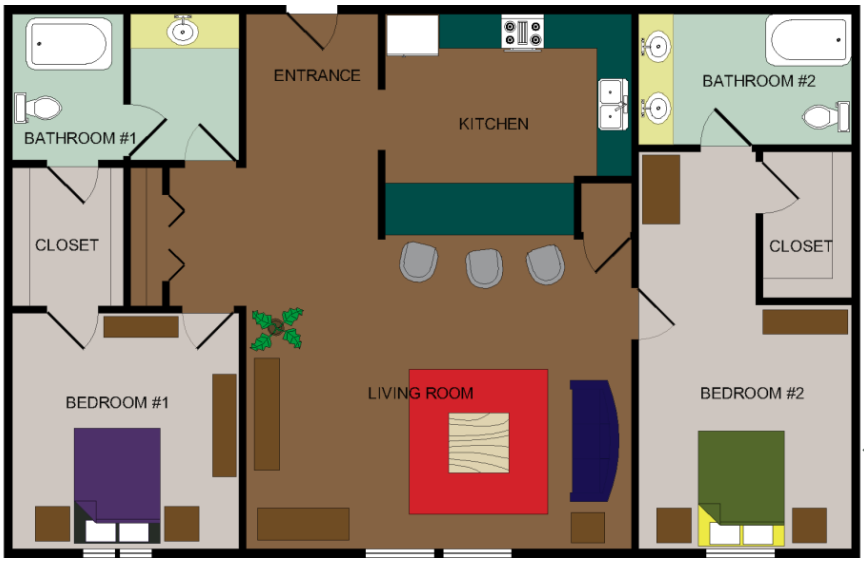
- User will be provided a floor plan determined by therapist in TheraLink (web application)
  - Two-Bedroom Home
  - Grocery Store
- Therapist (or User) will choose where to start the person by touching the screen in the desired location

Finding the Way – Grocery Store



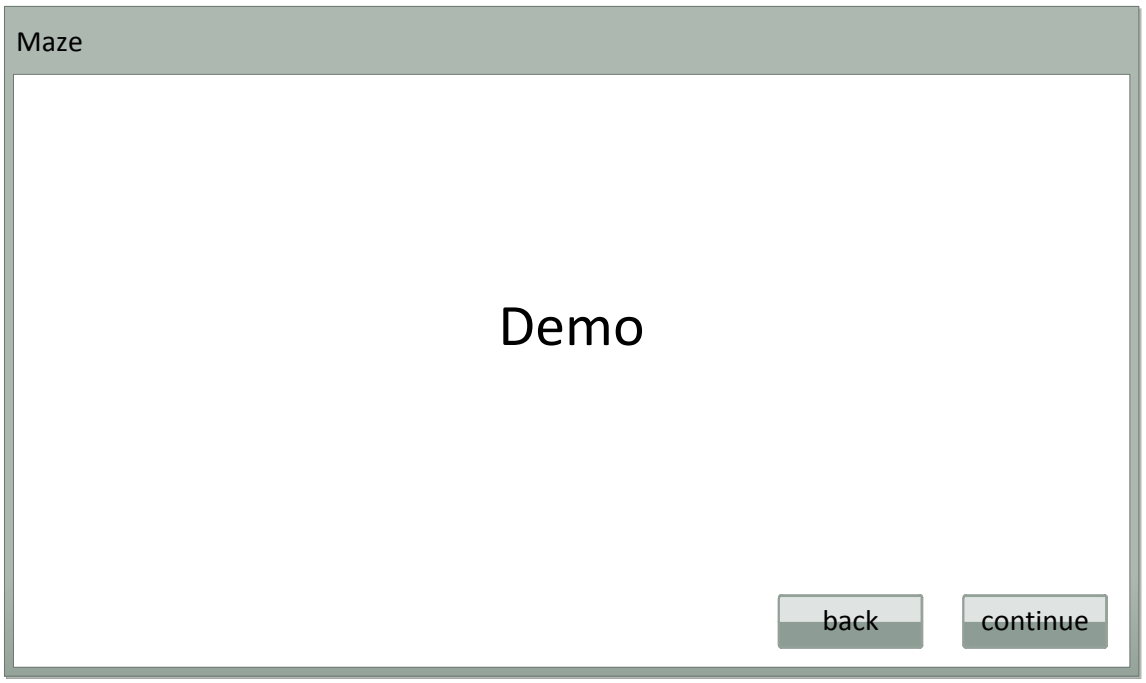
- User will be provided a floor plan determined by therapist in TheraLink (web application)
  - Two-Bedroom Home
  - Grocery Store
- Therapist (or User) will choose where to start the person by touching the screen in the desired location

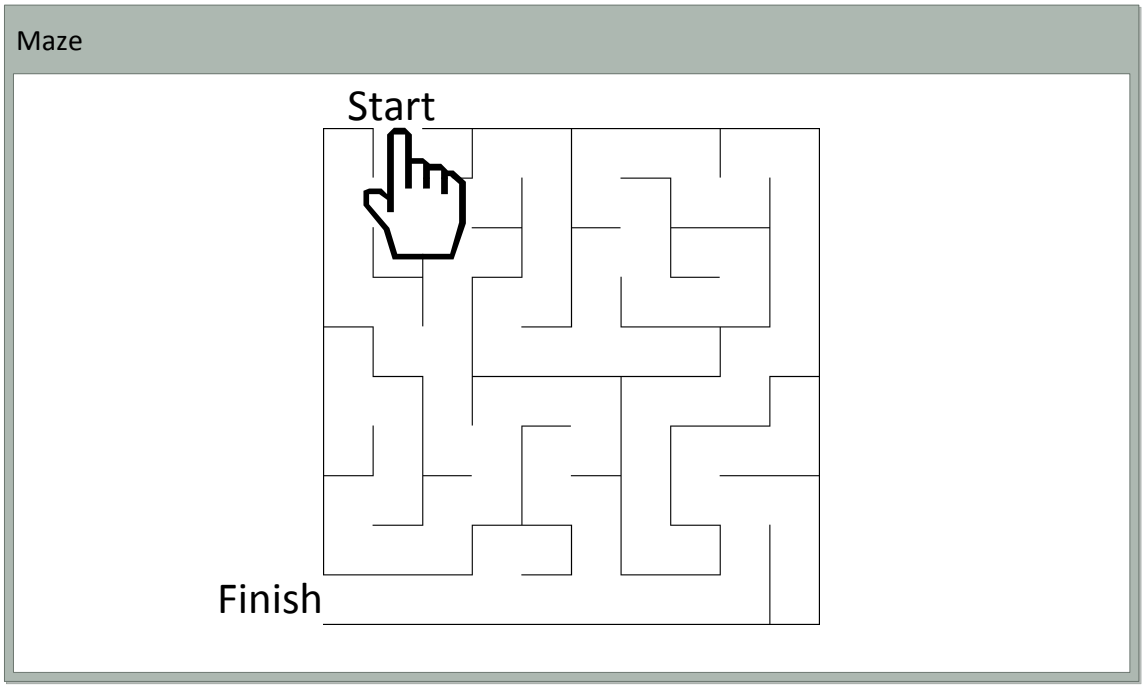
Finding the Way – Two-Bedroom Home



- User must navigate (using navigation buttons) person through floor plan to achieve different goals determined and stated by therapist
  - Two-Bedroom Home (i.e. find the quickest way to the bathroom, find the safest way to the kitchen, etc.)
  - Grocery Store (i.e. navigate your way to find the milk, you need to pick up your medication, etc.)

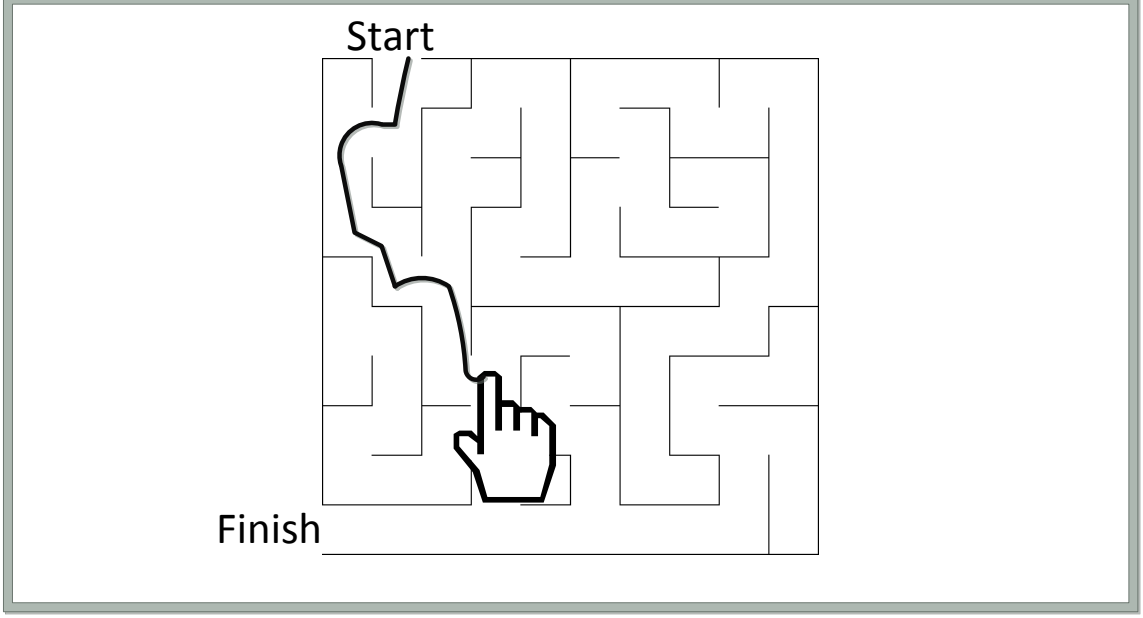
9.2.7. Maze





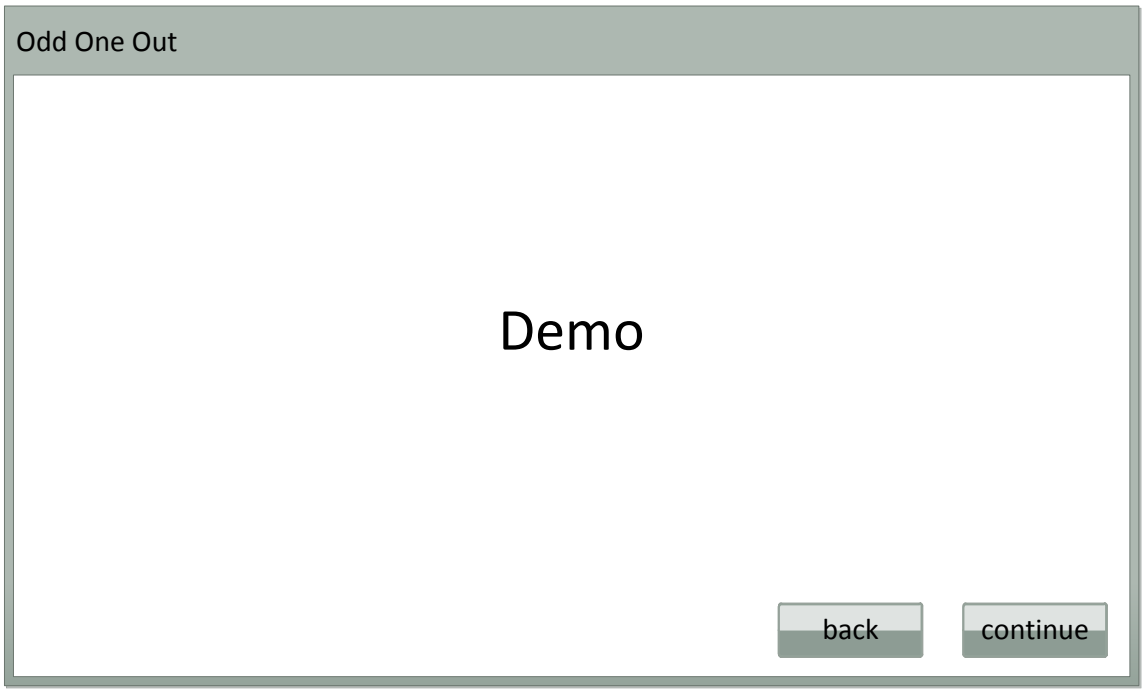
- Maze will appear on the screen (difficulty pre-defined)
- User must start dragging finger at “start” and solve maze by getting to the “finish”

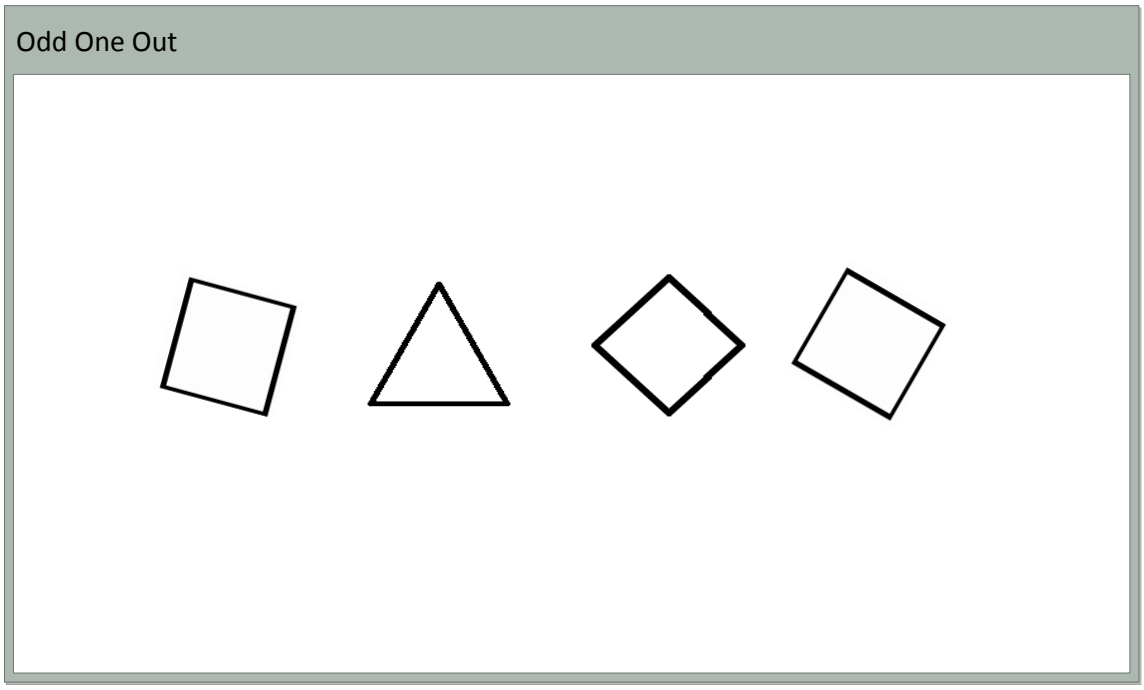
Maze



- User shall try to not hit any walls when drawing path
- Activity is complete when user reaches “Finish”

9.2.8. Odd One Out



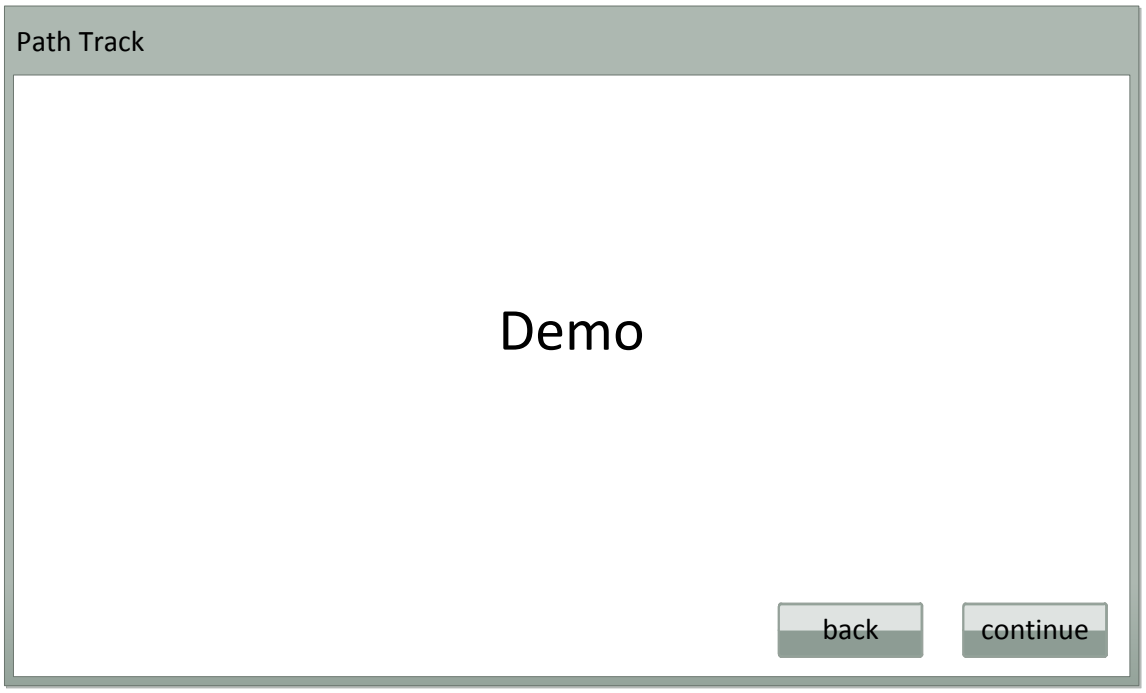


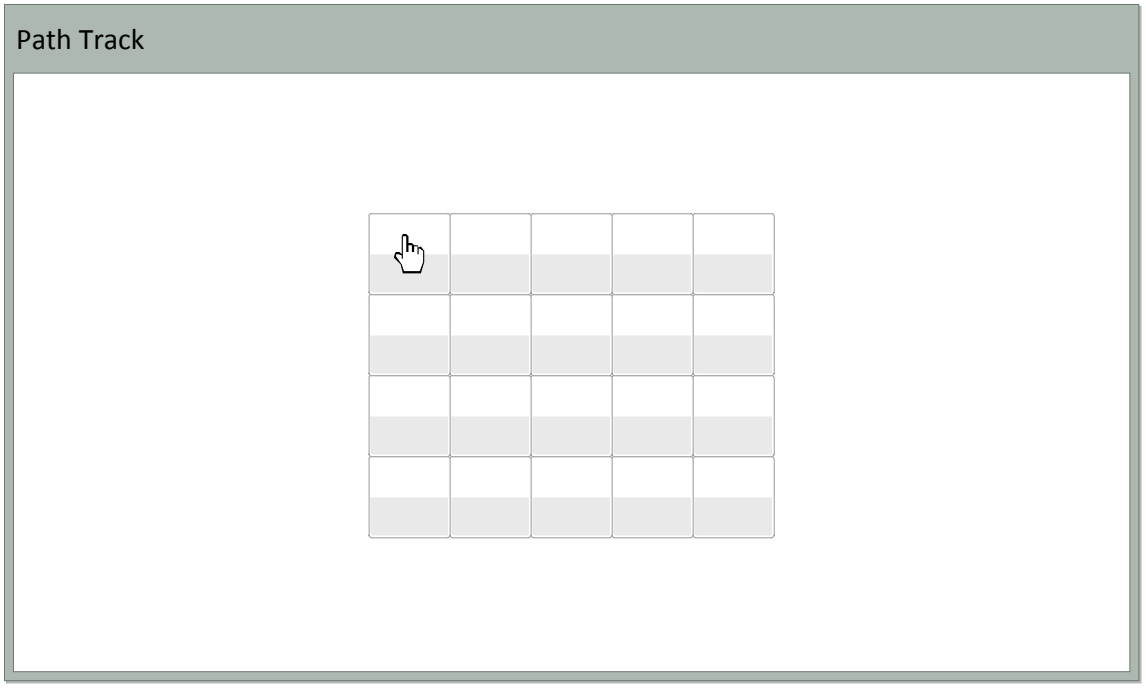
- Shapes or pictures will appear
- User will decide which image does not belong based on the given set of images
- The user will then touch with their finger which item does not belong in the set displayed.

Odd One Out

- Correct answer will be displayed
- The next set of random images will be displayed
- The user will then touch with their finger which item does not belong in the set displayed.

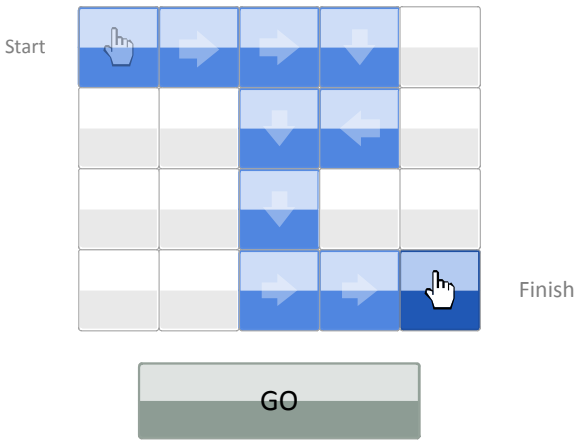
9.2.9. Path Track





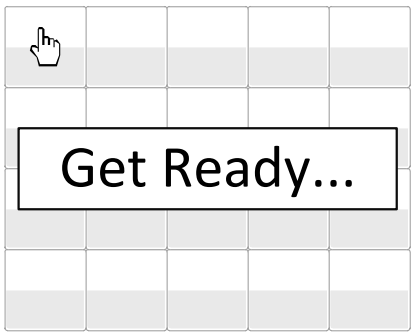
- Size of matrix specified in Staff Application
- User will watch the path the hand takes through the matrix grid

Path Track



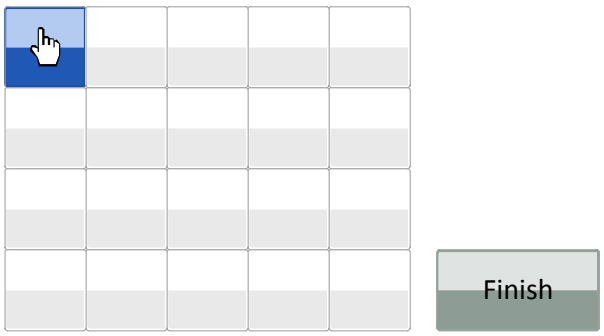
- Hand is animated moving from tile to tile through the matrix, to indicate the direction of path
- Path is outlined in a color or a visual marker to indicate where the path that was made
- Button press to clear matrix for user to enter path

Path Track



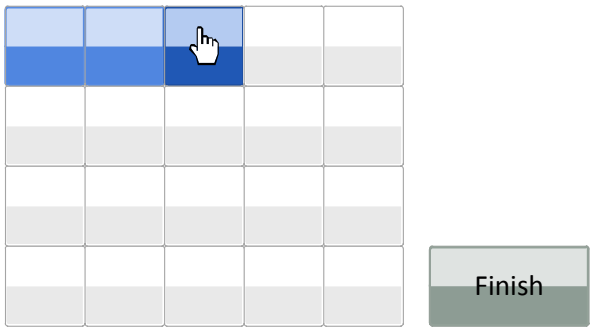
- Path is removed from matrix

Path Track



- Data collection starts
- User starts to retrace path from start to finish with finger

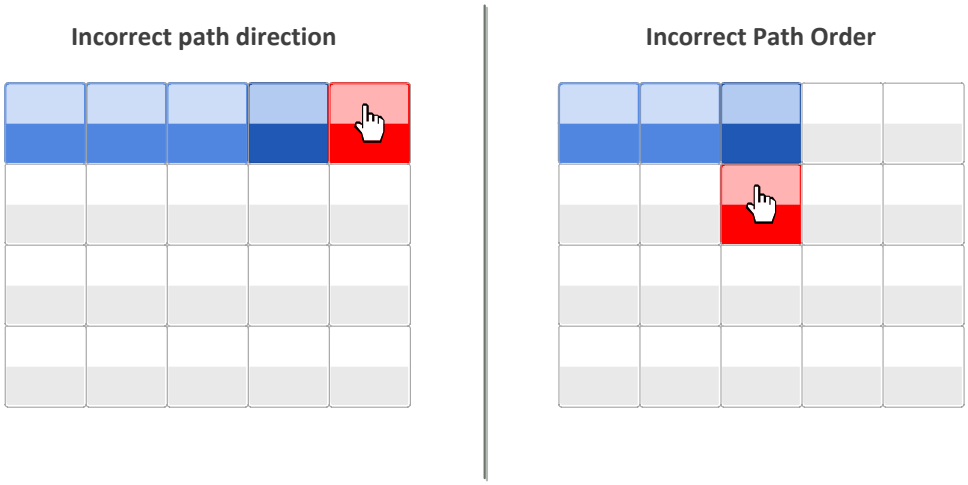
Path Track



- User can draw paths either by having constant contact (finger to matrix) or individually pressing each tile in the correct order from start to finish
- User's path will be outlined in a color or a visual marker as user draws path
- User's last correct tile is colored darker or marked differently to signify where to continue from

**Path & Drawing Options can be customized*

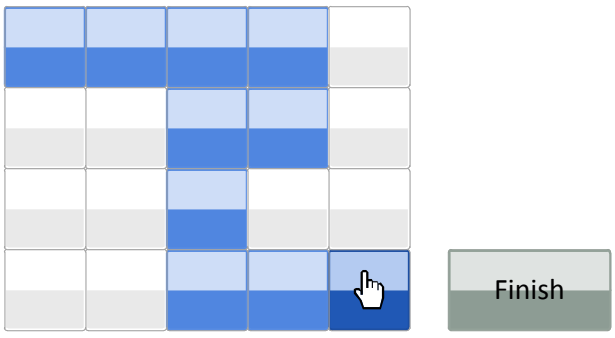
Path Track



- If user selects or draws to a tile not in path or is in path, but not in correct sequence, the selected tile will be colored or marked in a way to indicate not in path or incorrect order
- Incorrect tiles will fade back to a unselected default tile

**Options for Error Handling can be configured differently to get desired results (example: Turn off error indicators, so user's path is not skewed by errors)*

Path Track



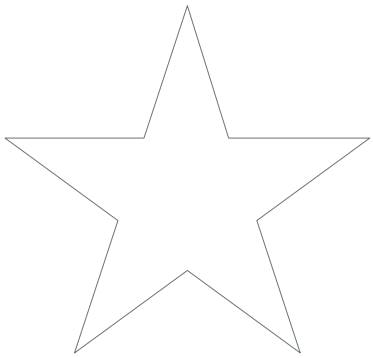
- User presses the "Finish" button to indicate path is redrawn and to stop activity/data collection
- If specified in options, Path Recall will restart with the next set of options and path pattern

9.2.10. Seek the Shape

Seek the Shape

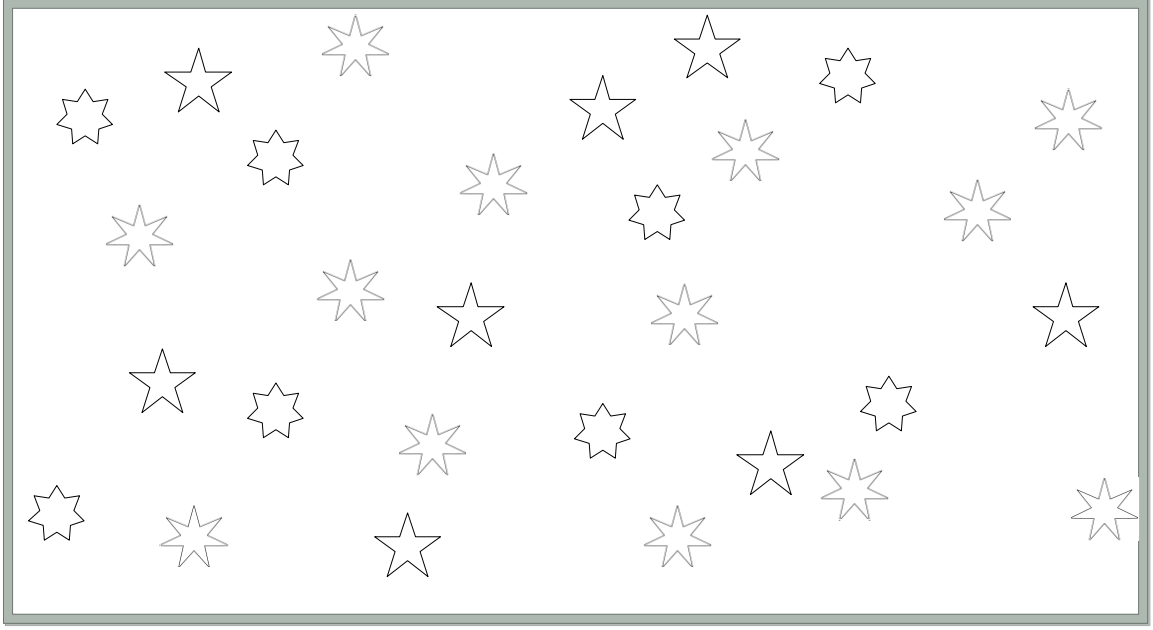
Demo

Seek the Shape



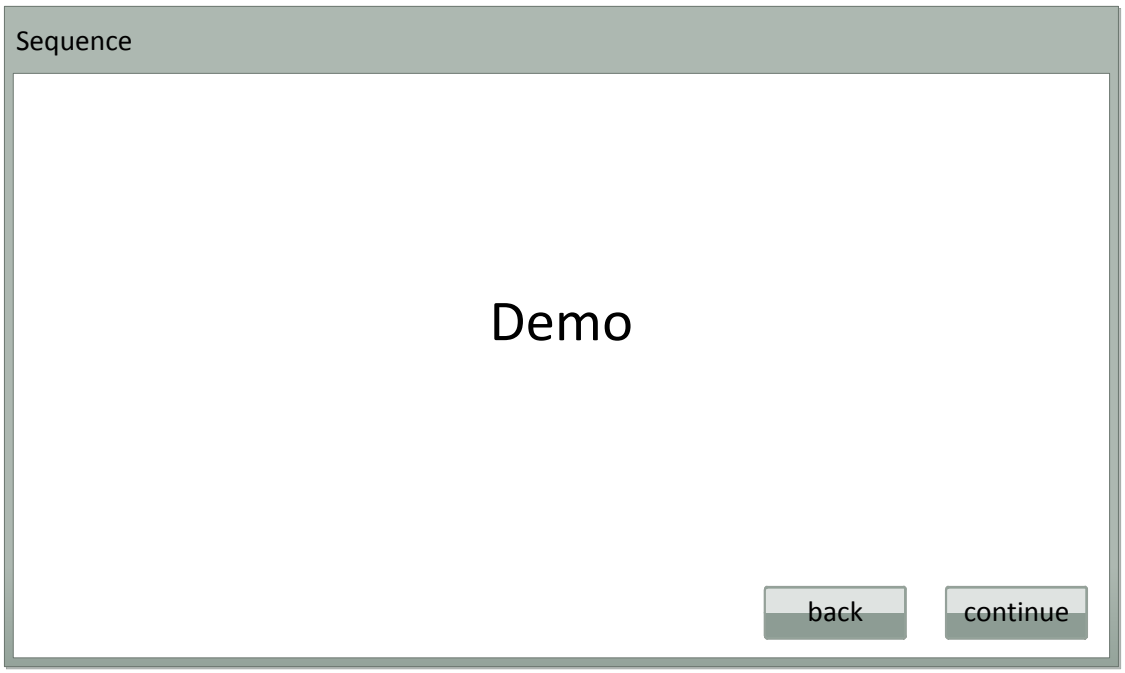
- Shape fades in
- Stays on screen for 5 seconds
- Shape fades out

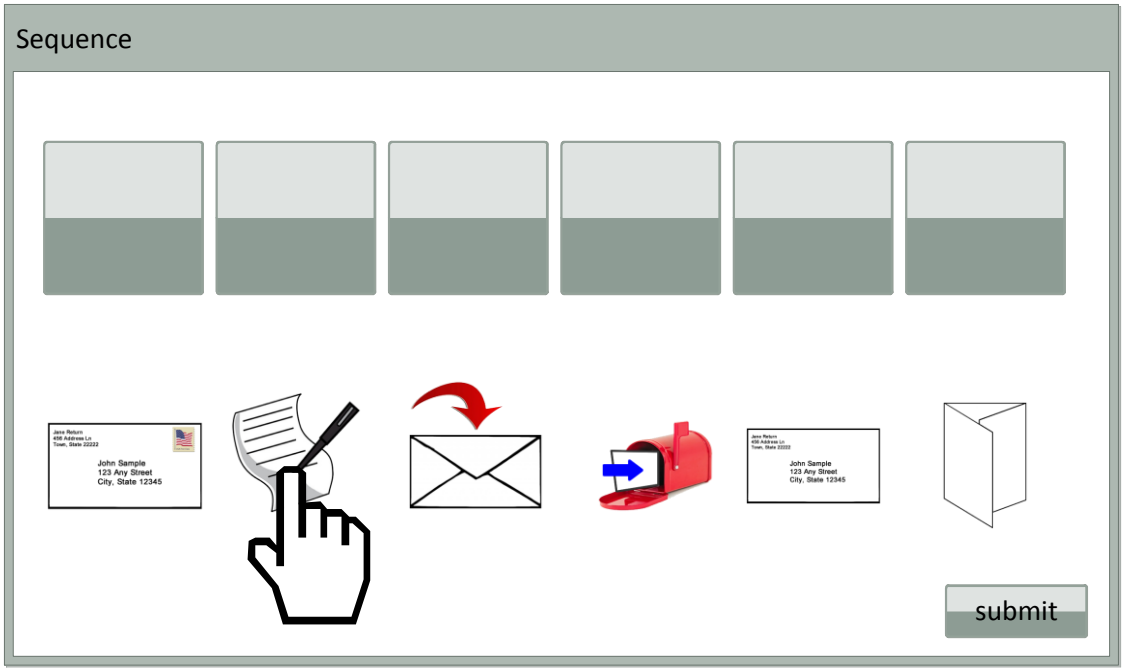
Seek the Shape



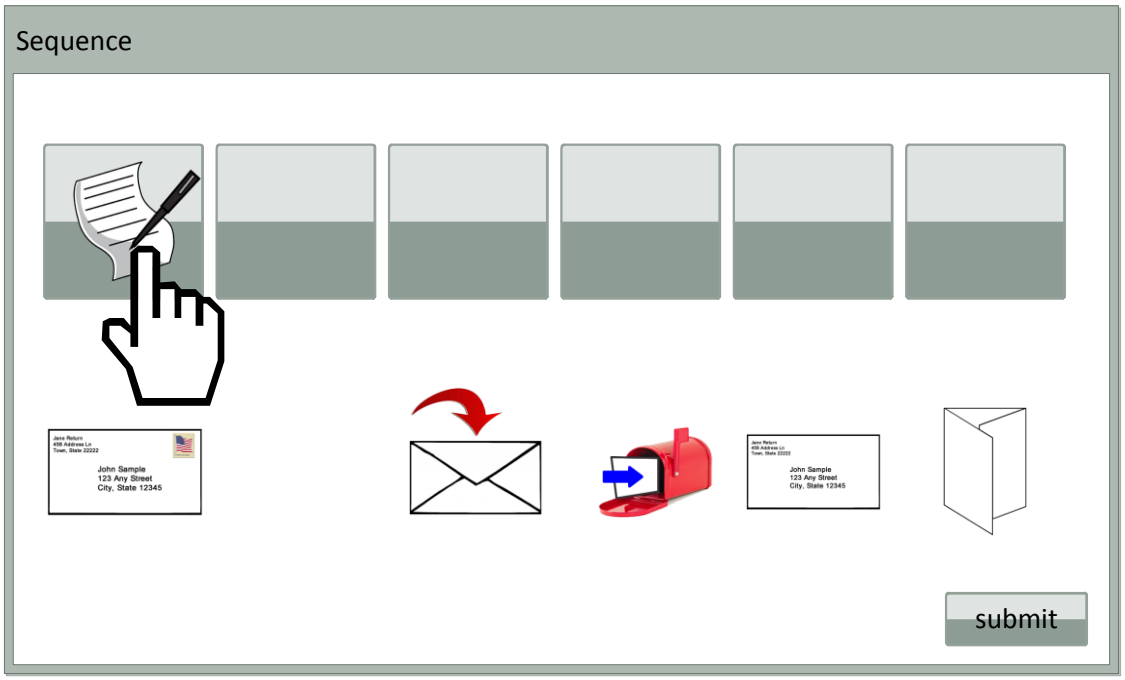
- User must select all instances of the shape appearing on the previous slide
- Once selected, shape changes colors

9.2.11. Sequence

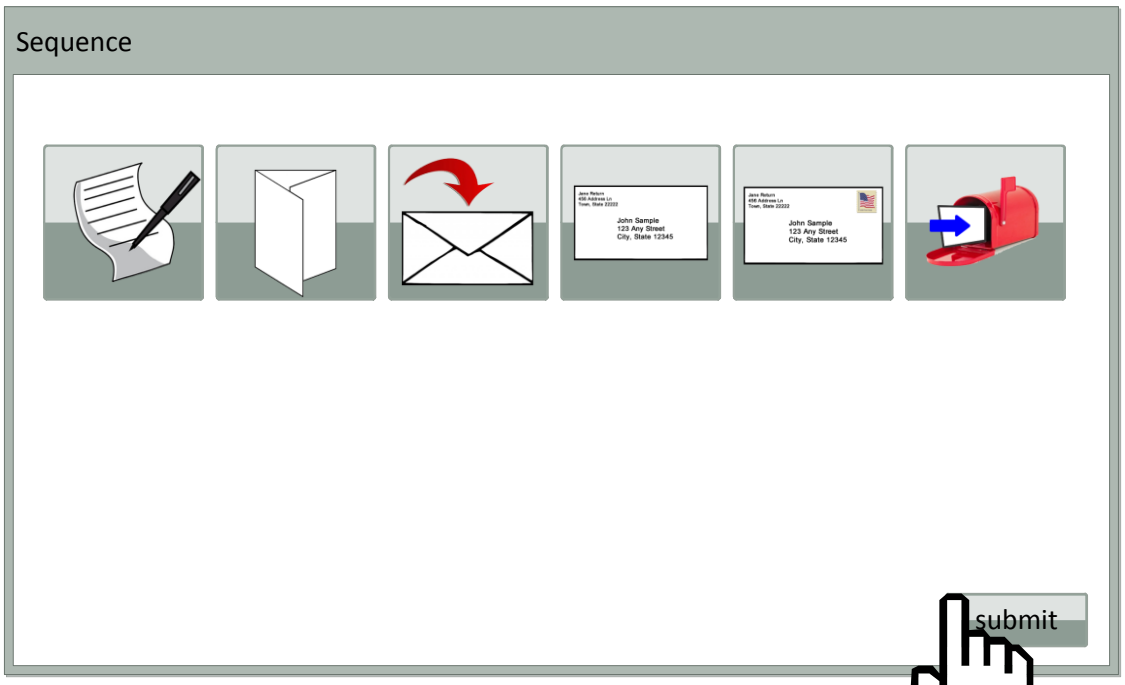




- User must place pictures in logical order by sliding them to their proper place

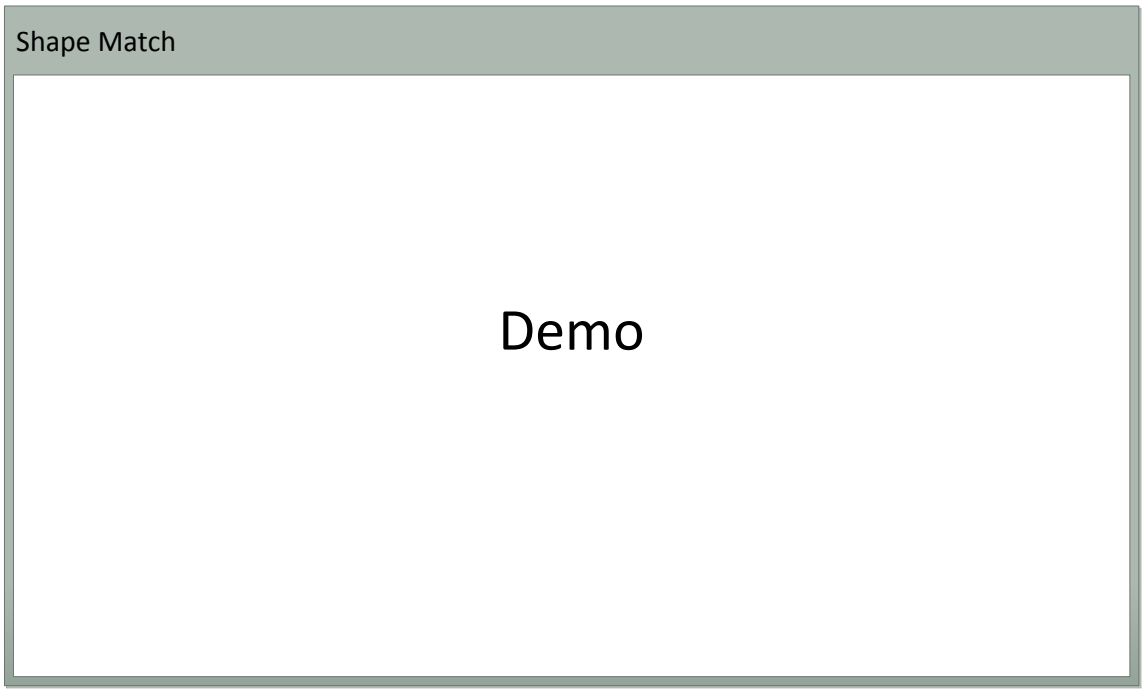


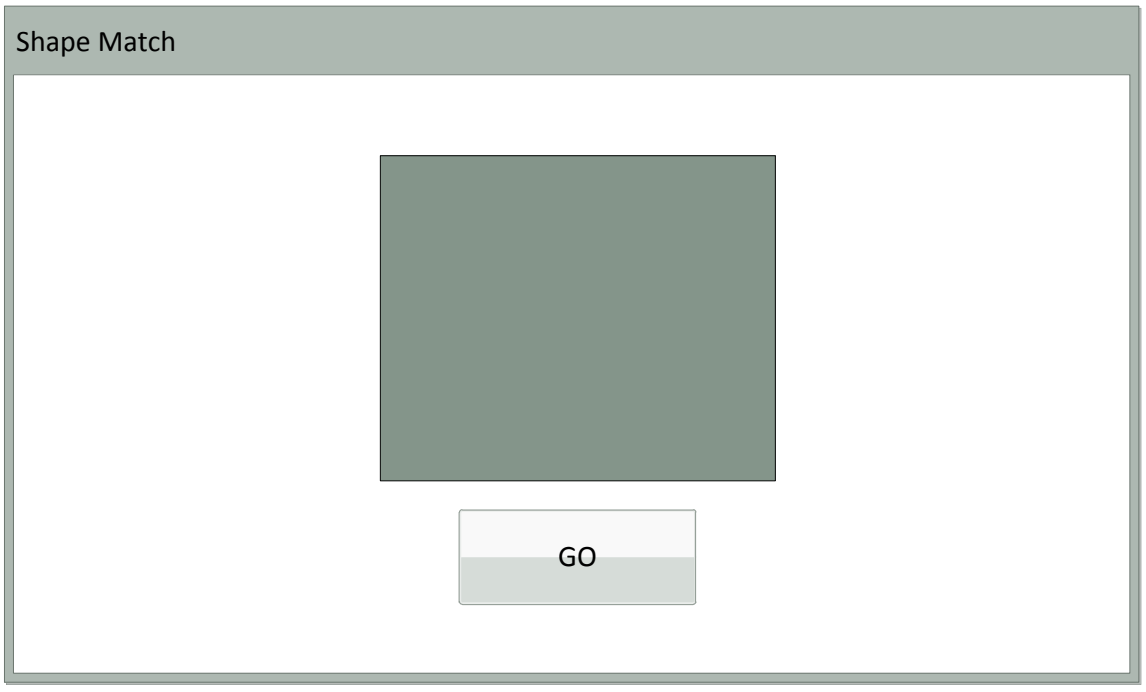
- Once money has been entered (user determines how much), they must then enter the letter-number associated with the item they wish to purchase



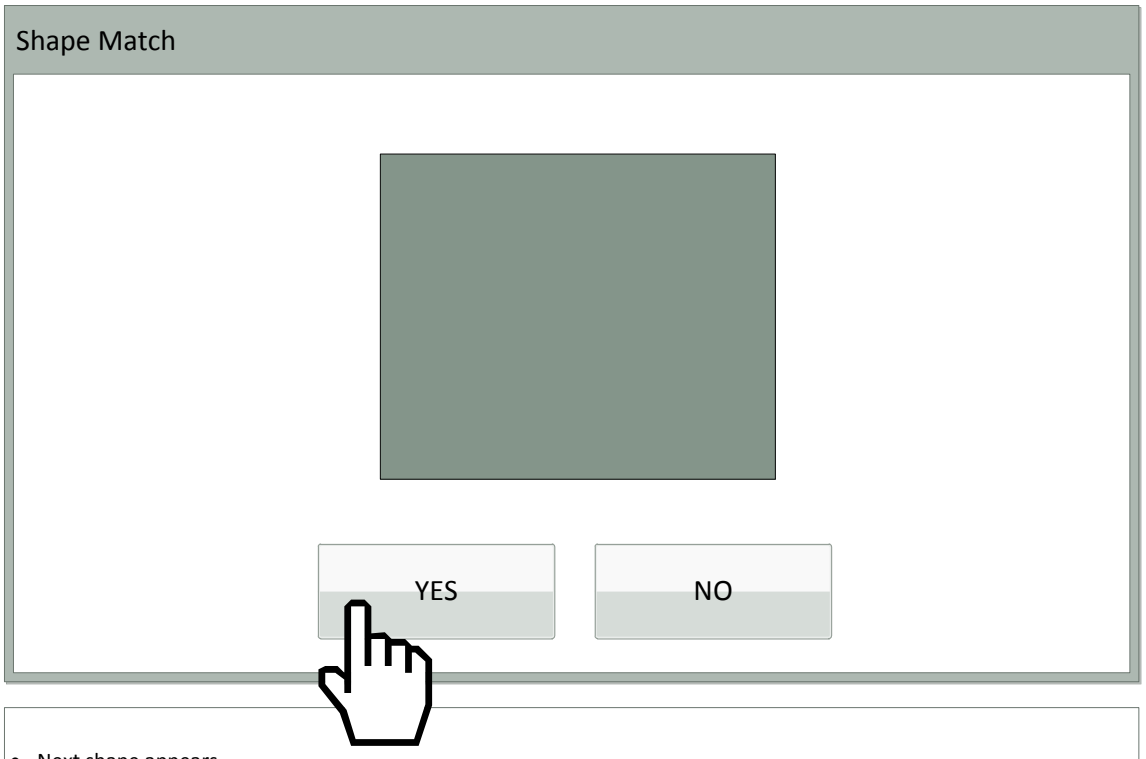
- Once the user is satisfied with the order they have created, they must select the “submit” button
- If the order is incorrect, the user will be told to try again (if the option is selected, the pictures in the correct spots will have a drop shadow showing the user which pictures to then rearrange and re-submit)

9.2.12. Shape Match

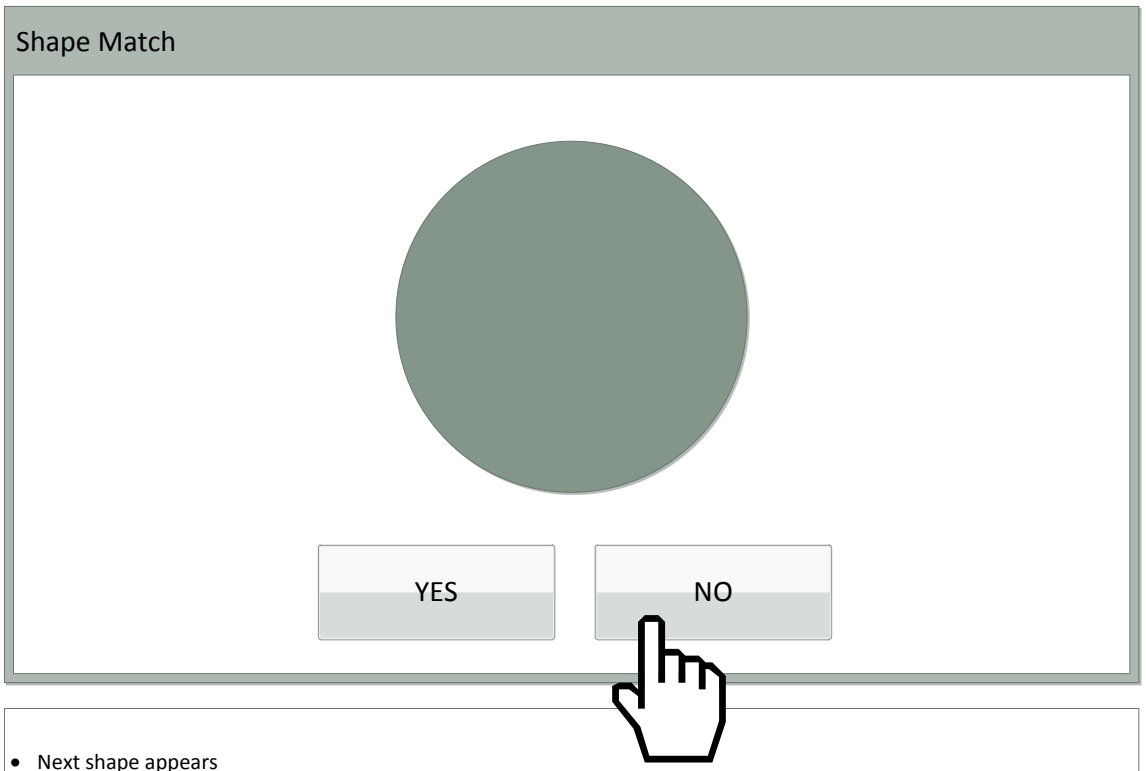




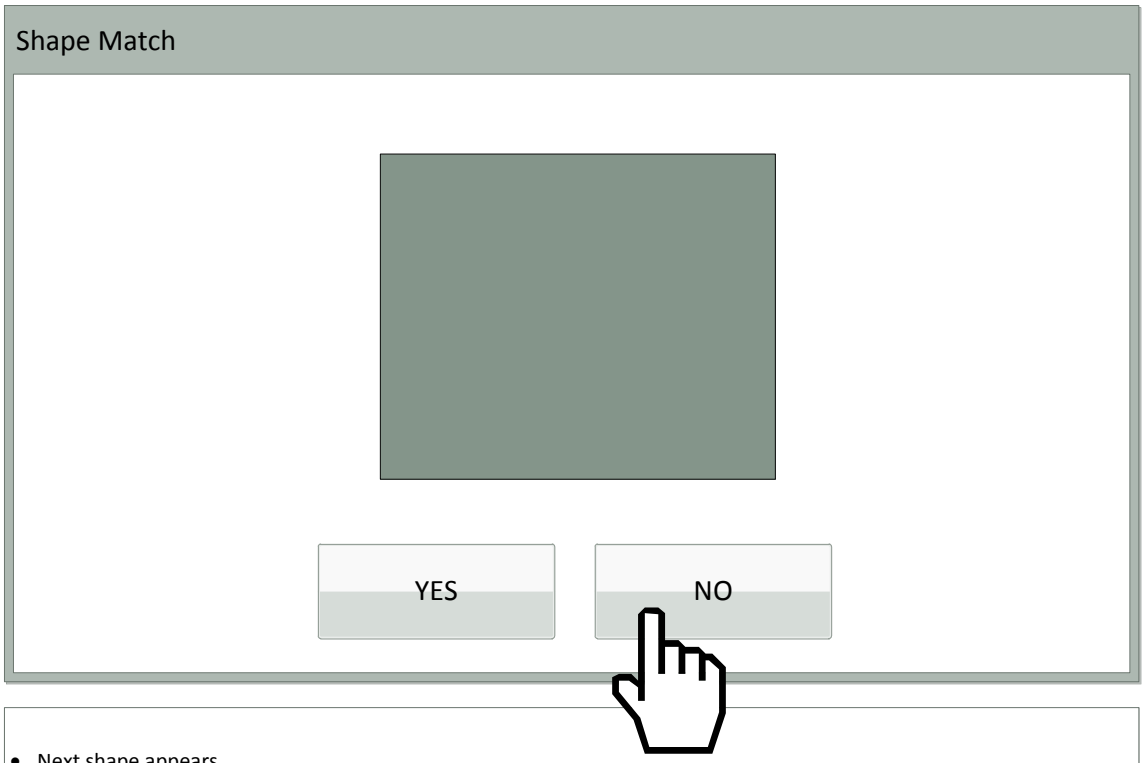
- First shape appears
- “GO” button pressed to begin data collection



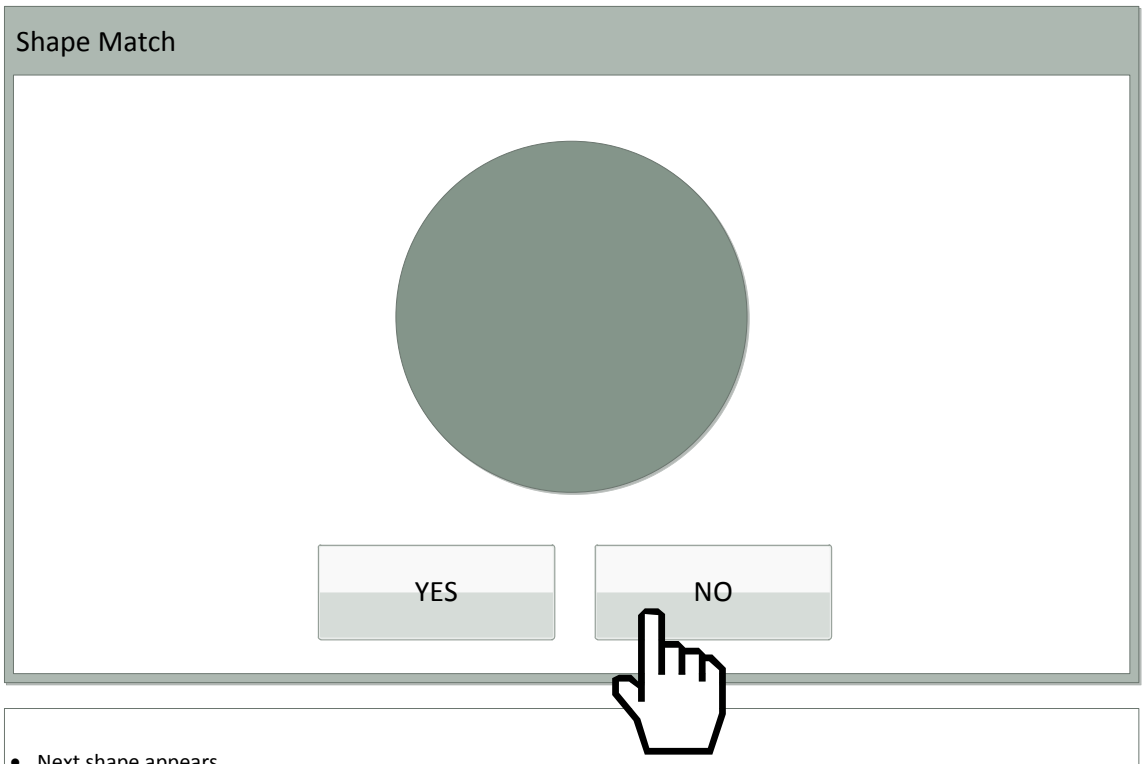
- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button



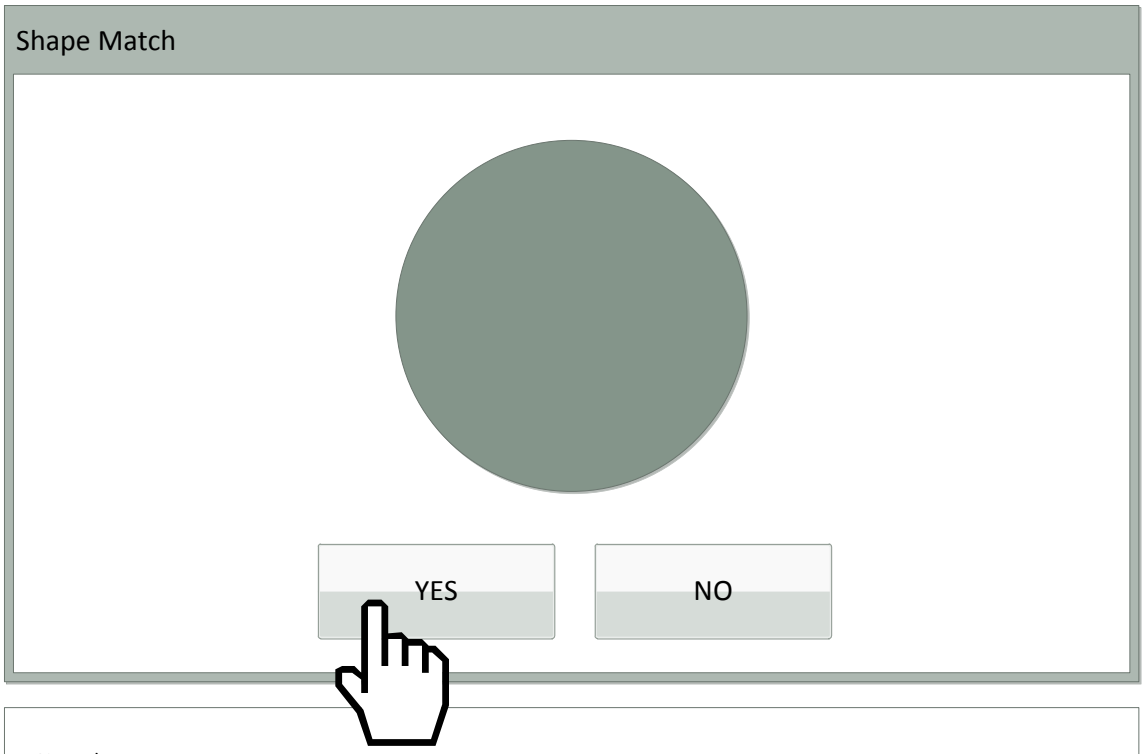
- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button



- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button

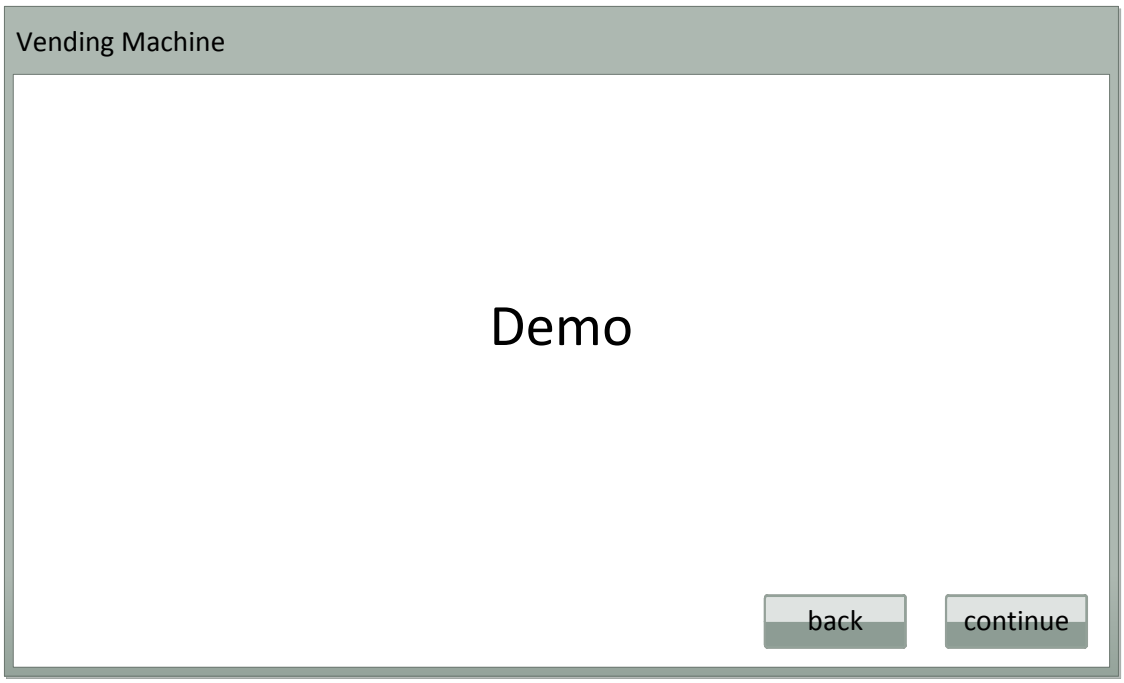


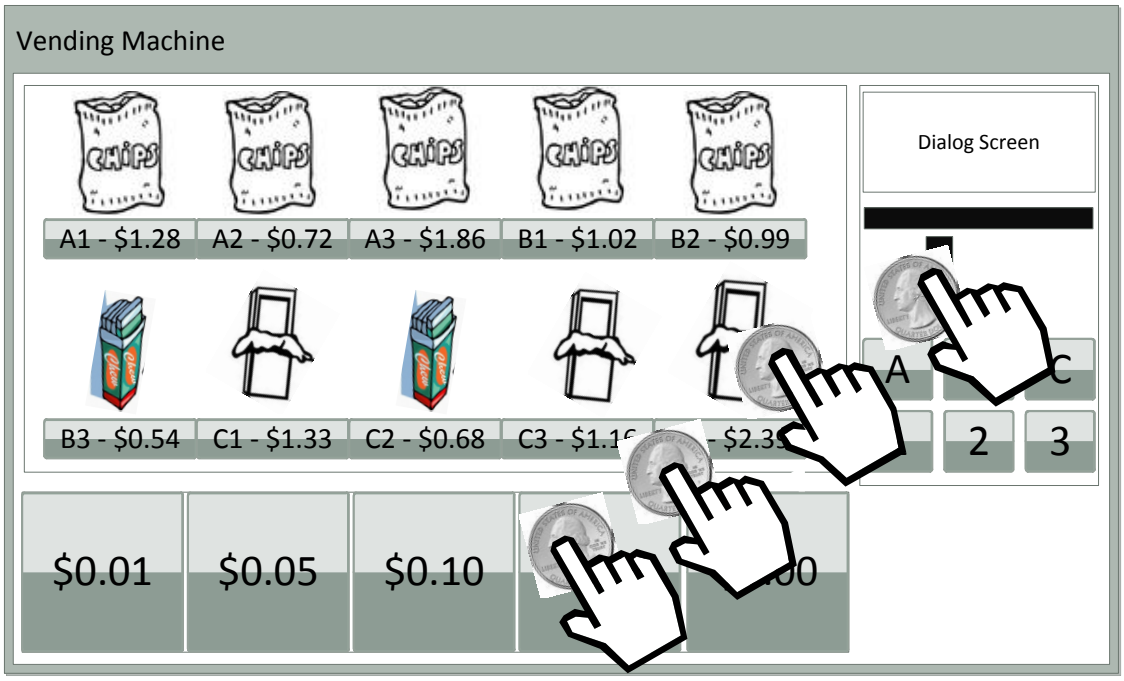
- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button



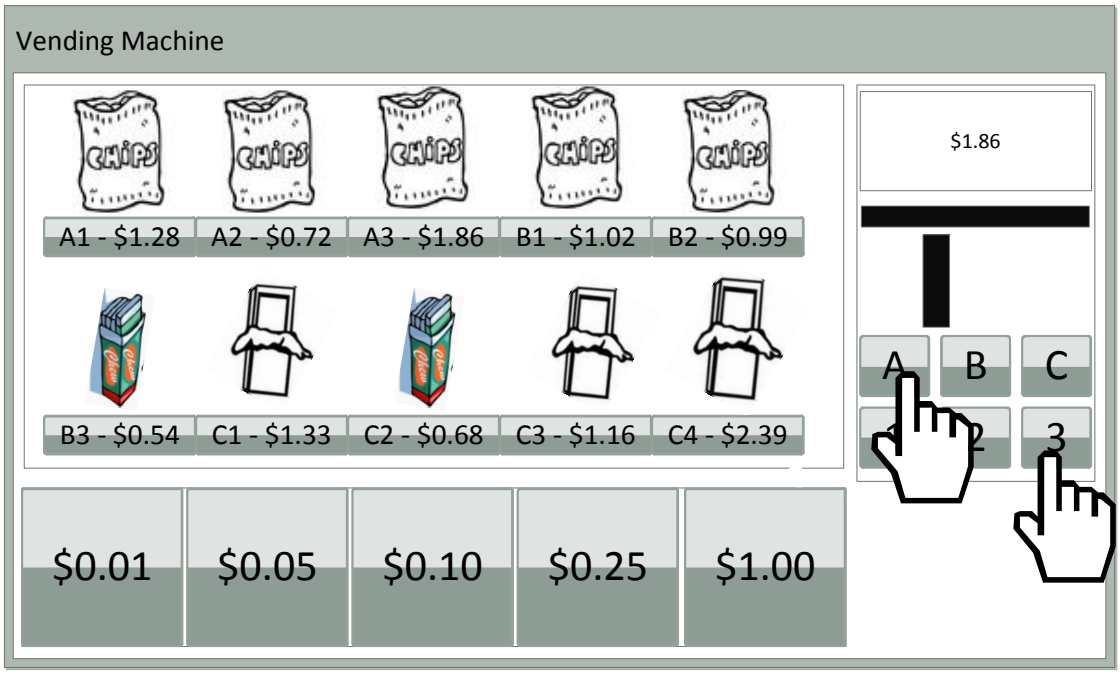
- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button

9.2.13. Vending Machine

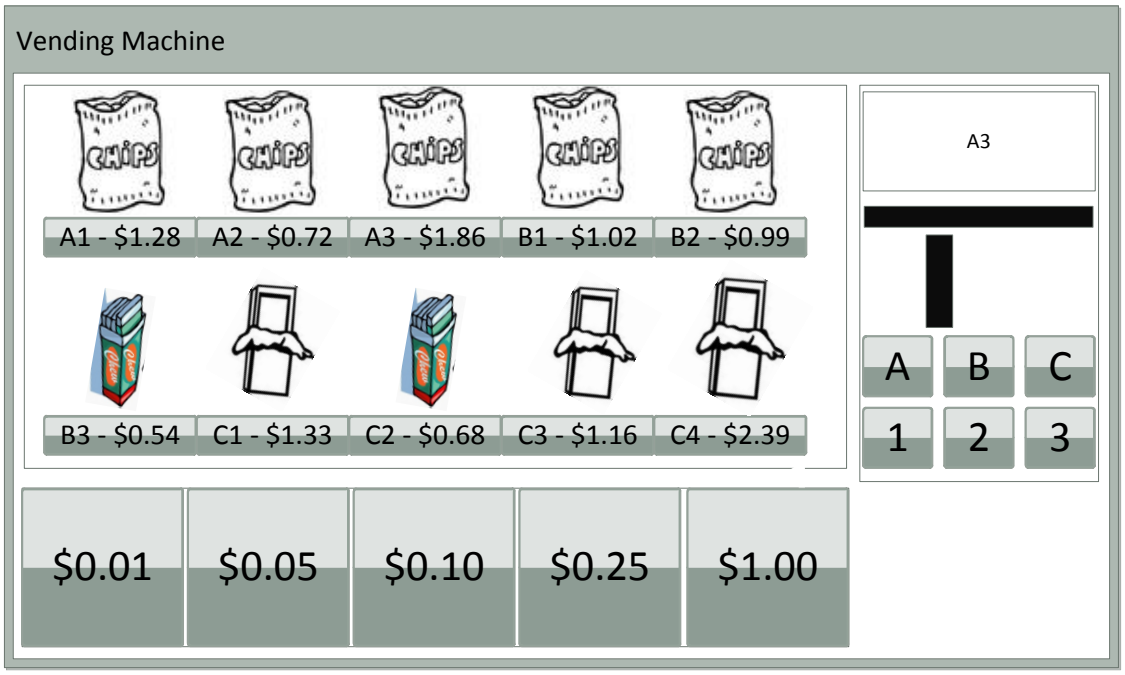




- User will choose which item they wish to purchase
- User will drag money from tray to coin/dollar slot(s)

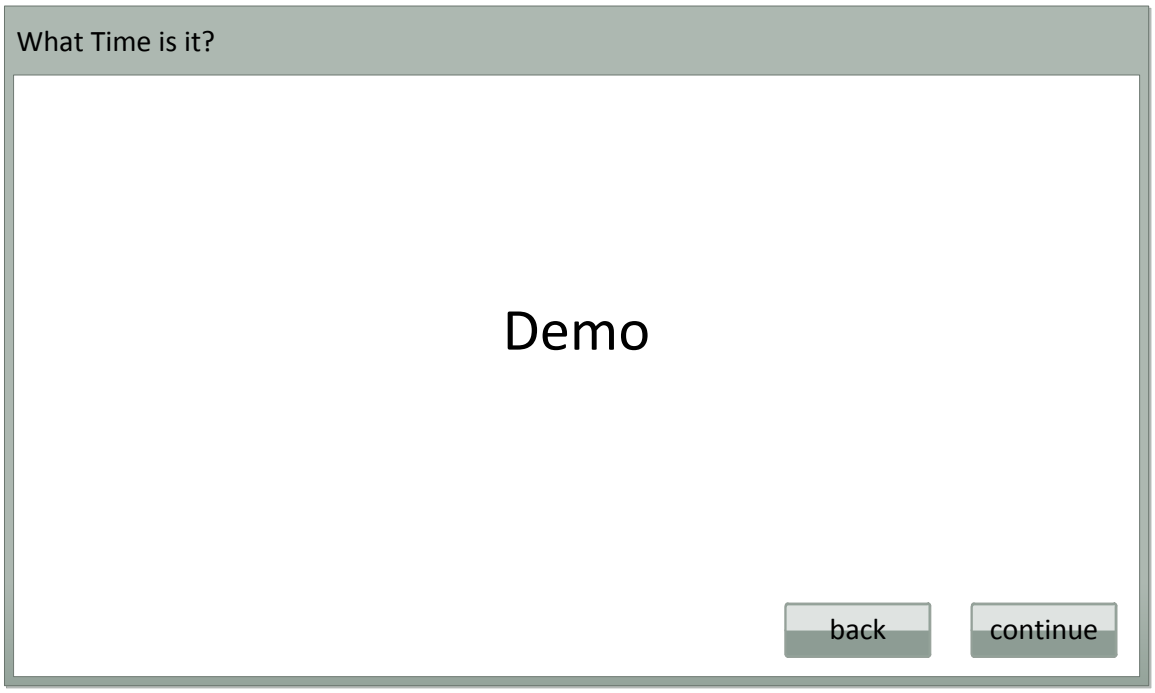


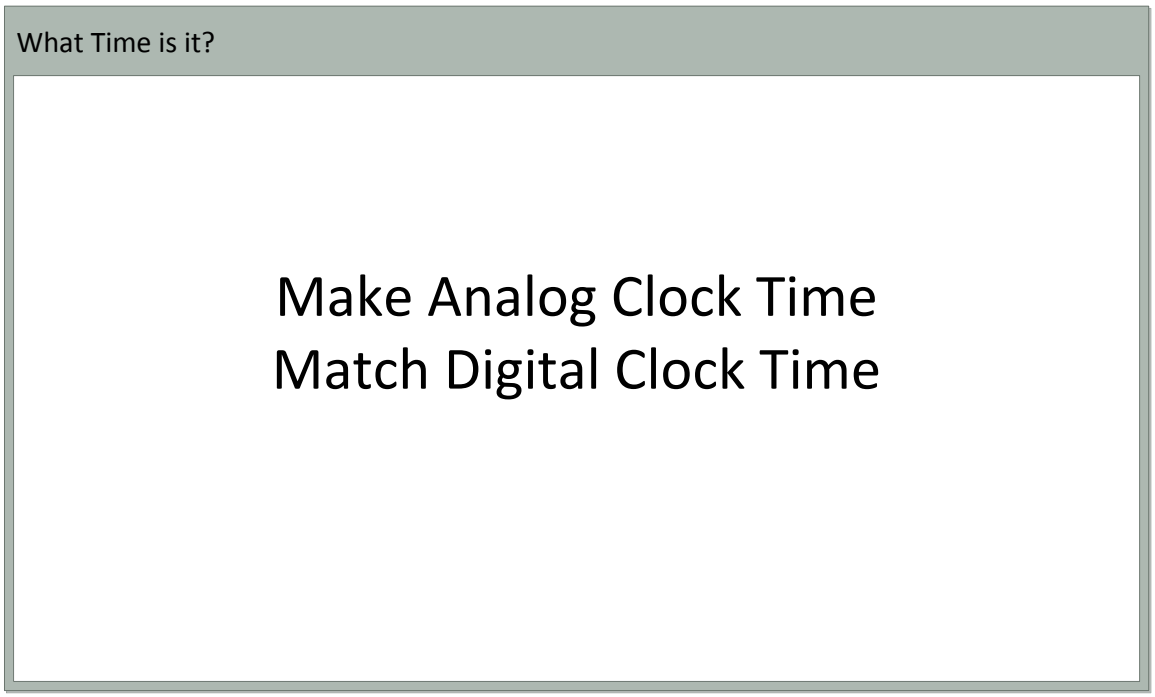
- Once money has been entered (user determines how much), they must then enter the letter-number associated with the item they wish to purchase



- If correct amount entered, item selected will “spin and drop” as if purchased
- If incorrect amount entered, display will show an error and count as incorrect

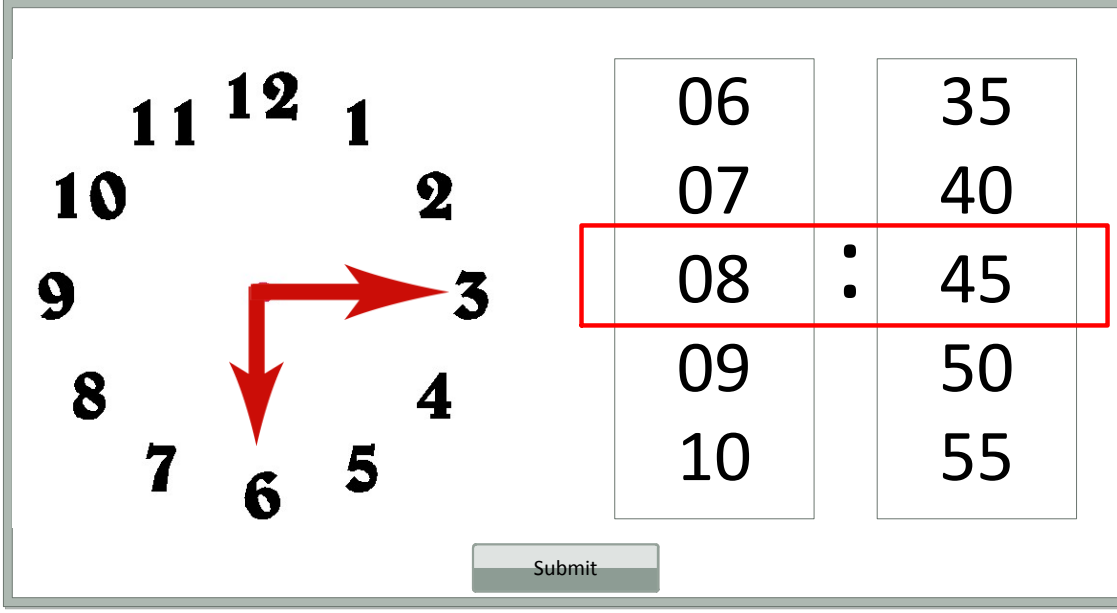
9.2.14. What Time is it?





- Digital → Analog
- Option defined by therapist in web app

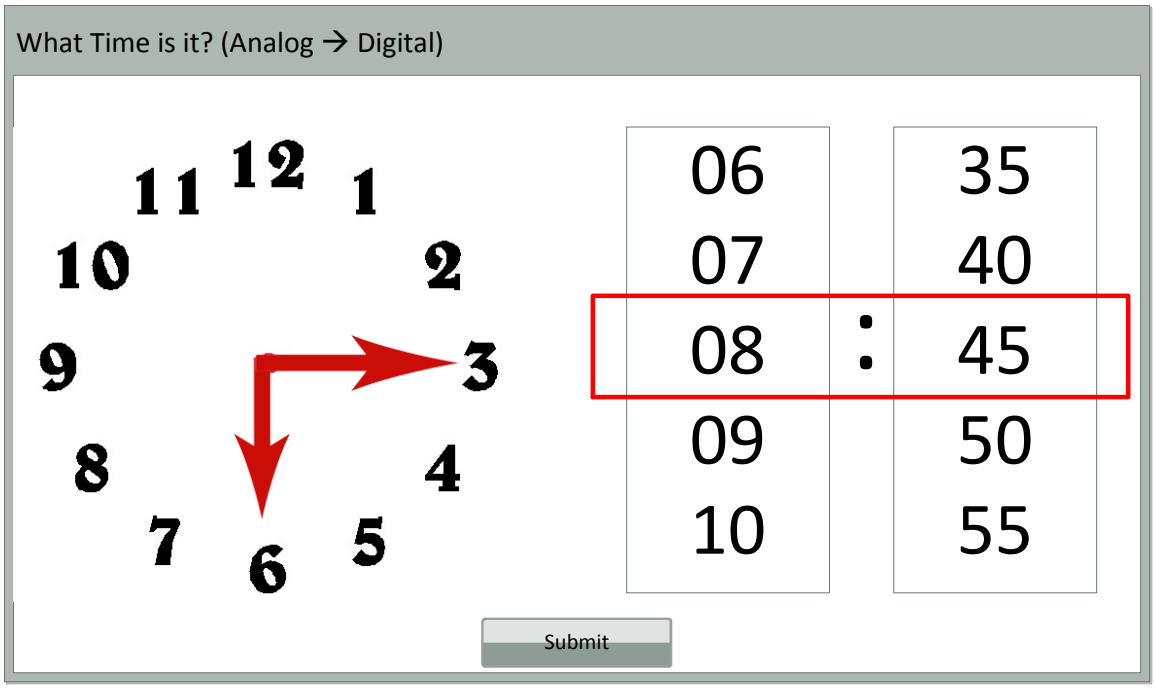
What Time is it? (Digital → Analog)



- Digital clock wheels are locked
- User must drag hands of analog clock to match digital time
- Press "Submit" button to check for accuracy
  - If wrong, try again!
- Repeat for # of times specified by therapist in Web App

What Time is it?

- Analog → Digital
- Option defined by therapist in web app



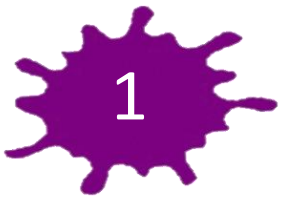
- Analog clock hands are locked
- User must spin digital clock wheels to display time on analog clock within red area
- Press "Submit" button to check for accuracy
  - If wrong, try again!
- Repeat for # of times specified by therapist in Web App

9.2.15. Wipe the Table

Wipe the Table

Demo

Wipe the Table



- Splat fades in with # (not necessarily in correct order)
- Stays on screen until user “wipes” (user must determine if number on screen is numerically next)
- Splat fades if user “wipes” off

Wipe the Table

- Splat fades in with #
- Stays on screen until user “wipes”
- Splat fades if user “wipes” off

Wipe the Table

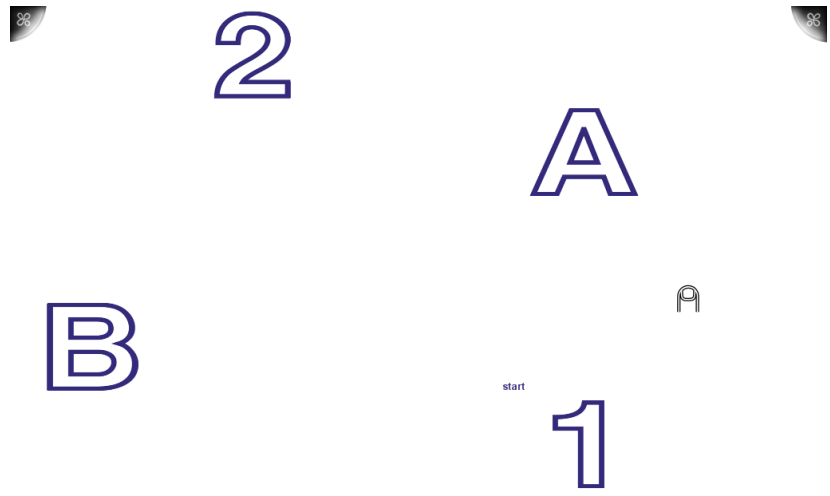
- Splat fades in with # (4 does not come after 2)
- Stays on screen for ?? seconds or until user “wipes” (if they wipe, get marked incorrect)

Wipe the Table

- Splat fades in with #
- Stays on screen until user “wipes”
- Splat fades if user “wipes” off

9.3. Activity Screens

9.3.1. Alternate Trail Making



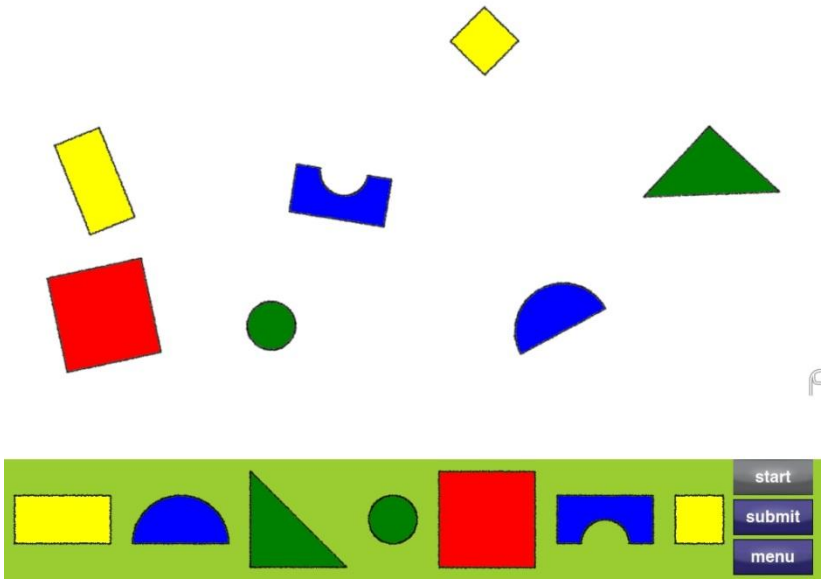
- Shapes appear on screen
- User must draw a line/connect the number 1, to the letter A , then the letter A to the number 2, then then the number 2 to the letter B

- Shapes appear on screen
- Once the last Letter in the sequence is highlighted the user will press submit

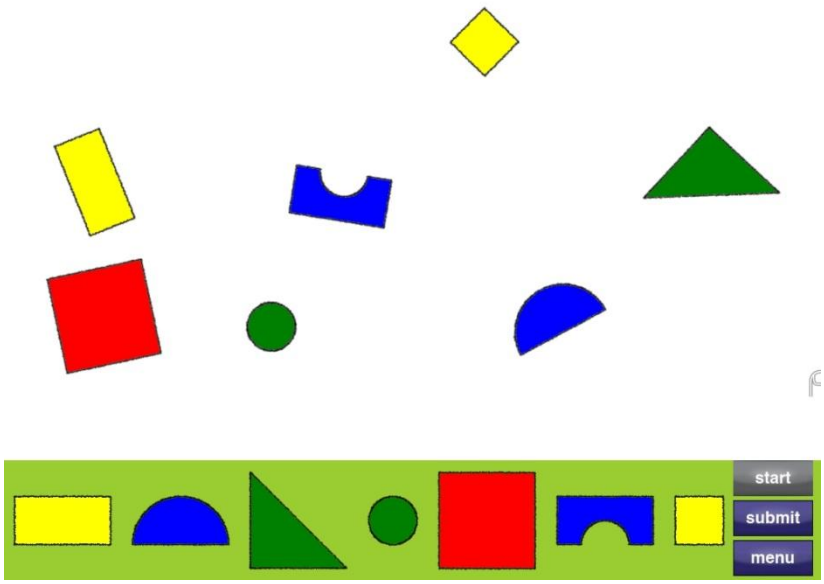
Alternate Trail Making

- Activity Options:
  - Circle → Triangle, 1 → A → 2 → B → 3 → C…
  - # of sizes (for shapes)/# of alternates (for number → letter) = (2-5 pairs)
  - Number of activity instances
- Information Recorded:
  - Time it takes to complete activity
  - Whether shapes or number/letter alternates
  - Is path correct?
  - Where wrong?
- To select:
  - Finger
  - Pen

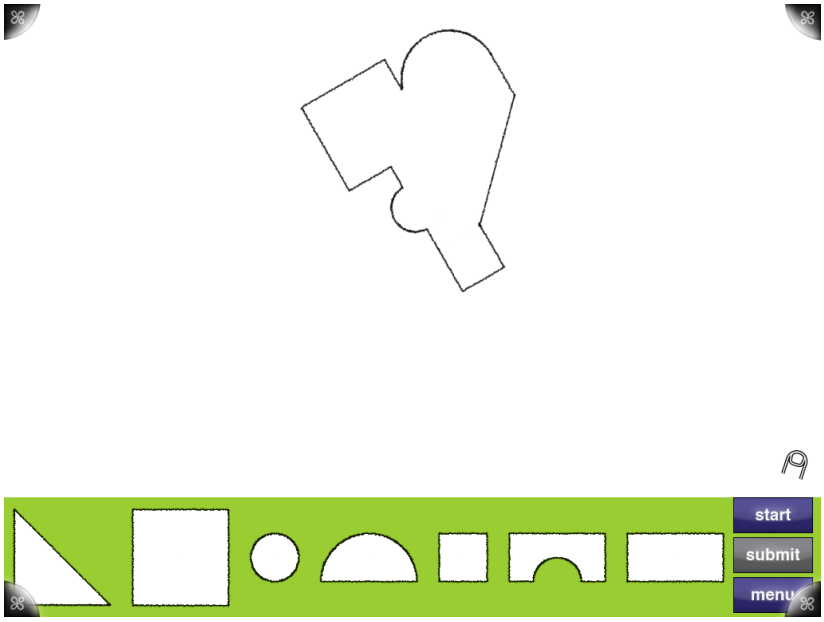
9.3.2. Block Bash



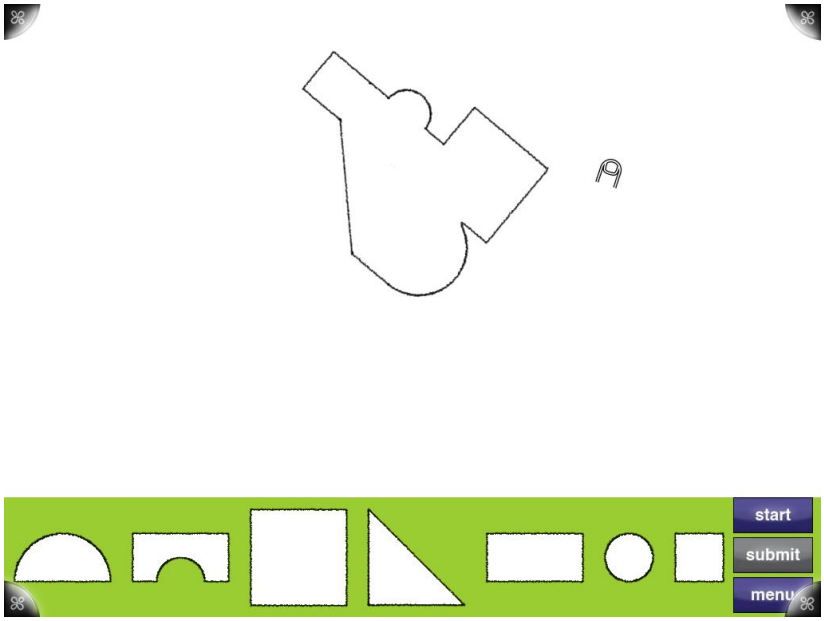
- Bottom row of shapes are placeholders for 3-D wooden blocks (each colored accordingly with tags for Microsoft Surface recognition)
- The following screens describe 3 different levels of this activity. Level will be provided based off of level selection by therapist in TheraLink (web application)



- Easy level – shapes appear on the screen in random location and orientation
- User must place block on top of matching shape (color and style)



- Medium Level – tanagram appears on the screen; tanagram is in color for matching
- User must place block on top of matching shape (color and style)



- Hard Level – tanagram appears on the screen; color has been removed
- User must place blocks to create tanagram on screen

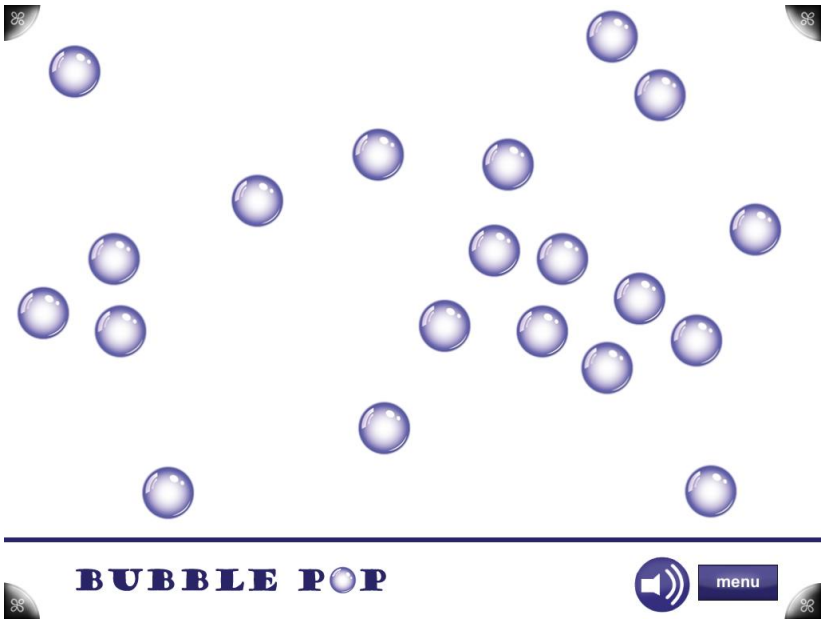
- **Block Bash**

- Options
  - Three Levels
    - Easy (Random Shape Placement/Orientation)
    - Medium (Tanagram with Color)
    - Hard (Tanagram Monochromatic)

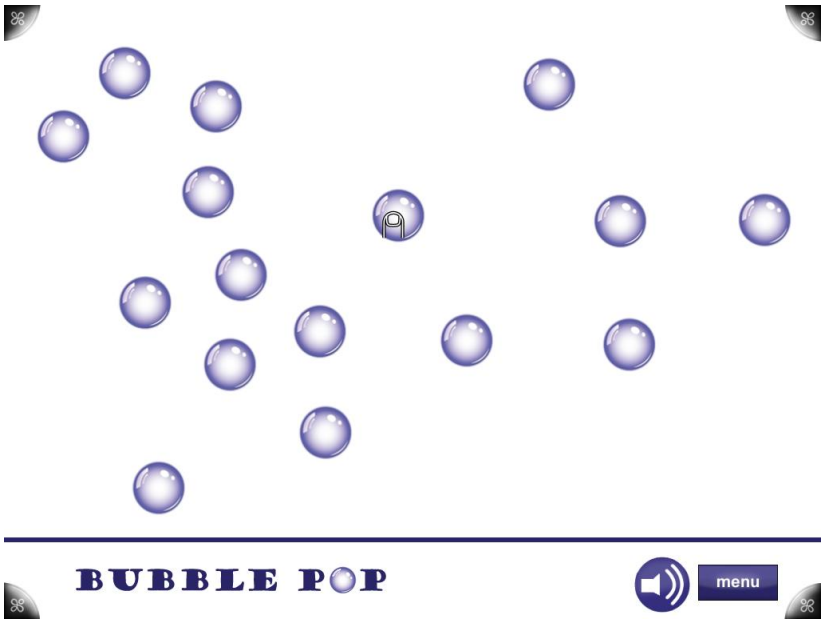
- Info Recorded
  - Time to Complete
  - Correct/Incorrect Block Placement

- To Register with Microsoft Surface
  - Using Block

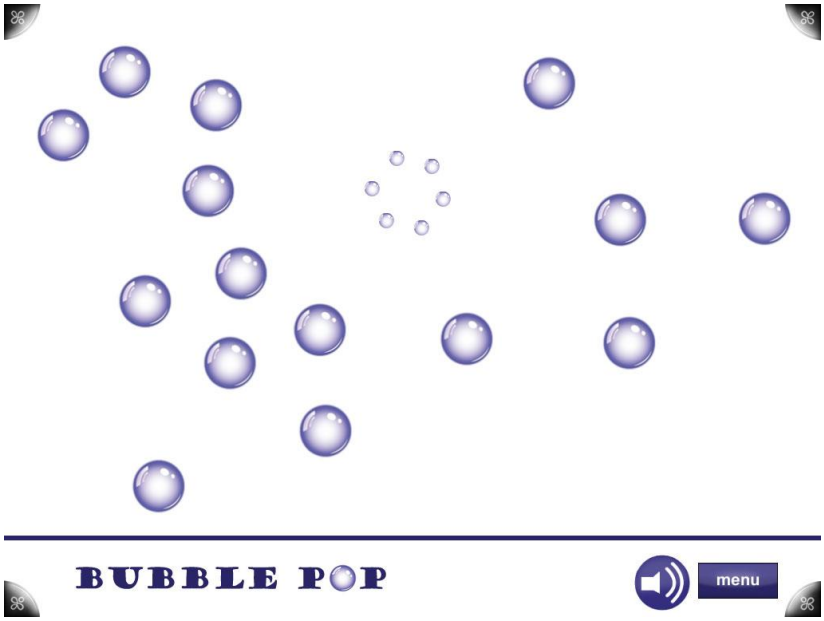
9.3.3. Bubble Pop



- Bubbles will enter screen from all sides, and will remain on screen until popped
- Bubbles will be constantly moving/bouncing against each other and edges of screen
- Number of bubbles displayed & size of the bubbles defined in level chosen by therapist in TheraLink (web application)



- User must “pop” bubbles by touching a bubble

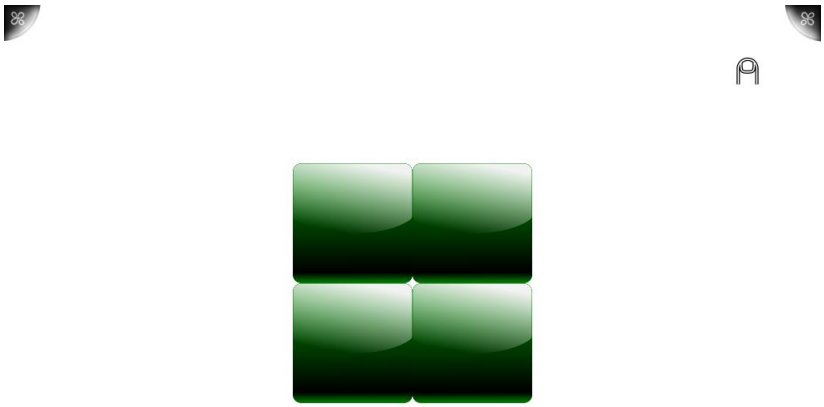


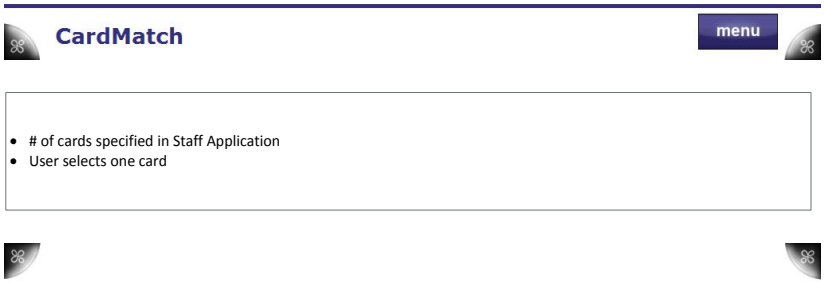
- Bubble will pop on contact
- Activity completes when all bubbles on screen have been popped

- **Bubble Pop**

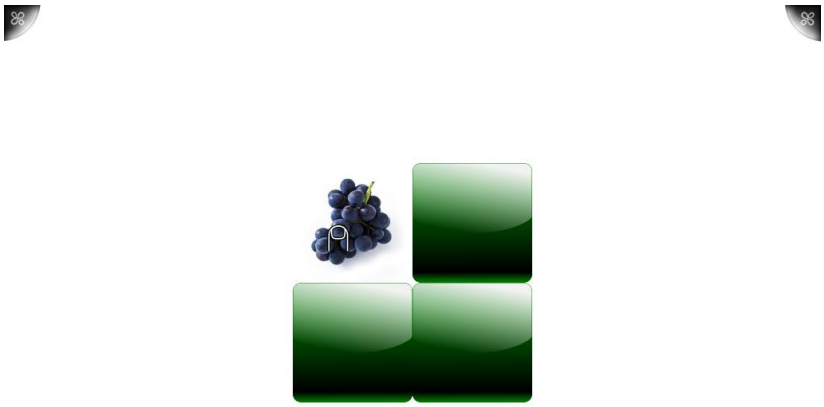
- Options
  - Number of bubbles displayed
  - Size of bubbles
- Info Recorded
  - Time it takes to complete activity
- To Pop Bubbles
  - Finger

9.3.4. Card Match

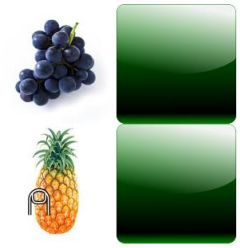




- # of cards specified in Staff Application
- User selects one card

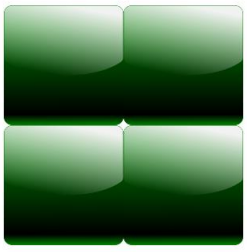


- Card image stays displayed while user selects another card



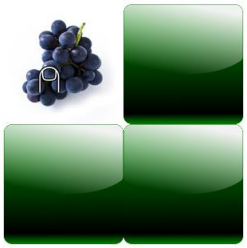
CardMatch menu

- Cards do not match



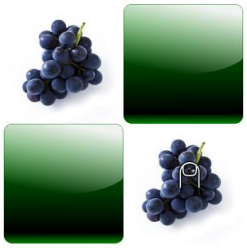
CardMatch menu

- User must try again
- User selects one card



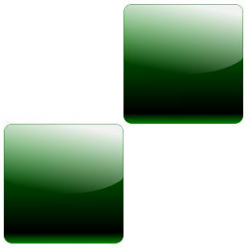
CardMatch menu

- Card image stays displayed while user selects another card



CardMatch menu

- Match Found!



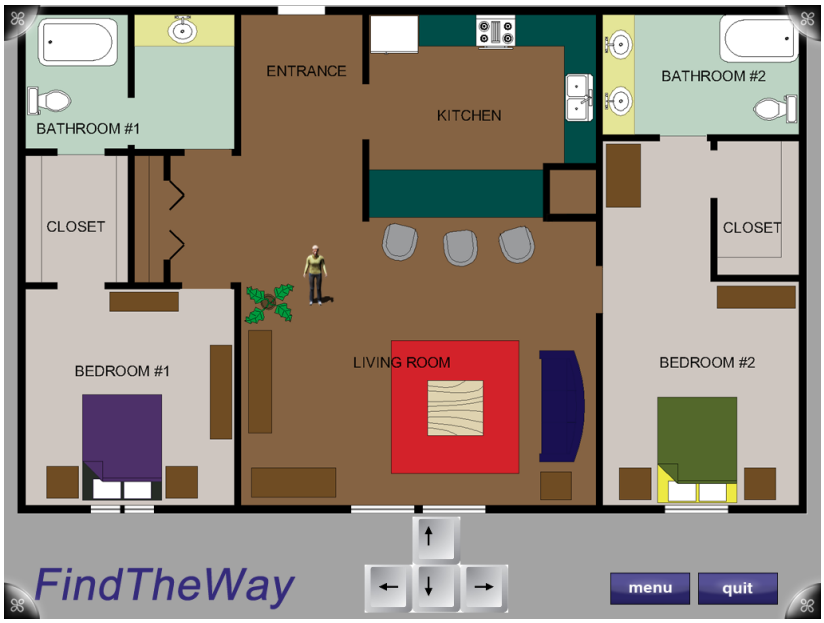
CardMatch menu

- Matching cards disappear
- User must select another card

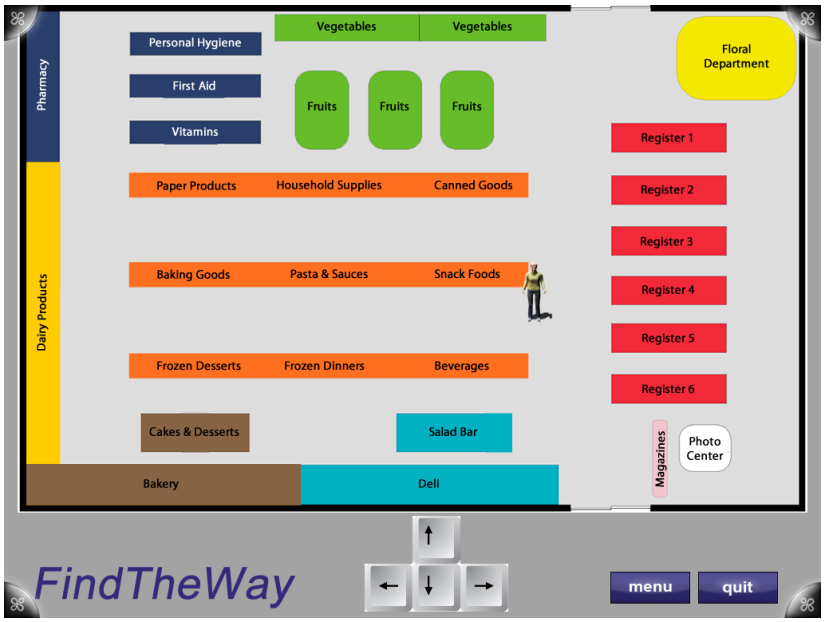
Card Match

- Activity Options
  - # of cards (no more than 10 pairs)
- Info Recorded
  - Time it takes to complete activity
  - Number of cards used
- To select cards
  - with finger
  - with pen

9.3.5. Find The Way



- User will be provided a floor plan determined by therapist in TheraLink (web application)
  - Two-Bedroom Home
  - Grocery Store
- Therapist (or User) will choose where to start the person by touching the screen in the desired location

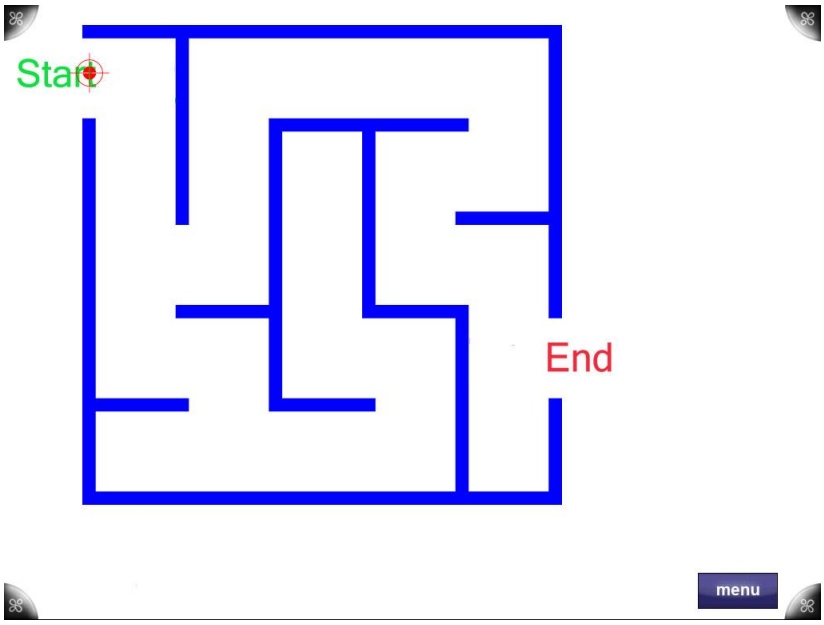


- User will be provided a floor plan determined by therapist in TheraLink (web application)
  - Two-Bedroom Home
  - Grocery Store
- Therapist (or User) will choose where to start the person by touching the screen in the desired location

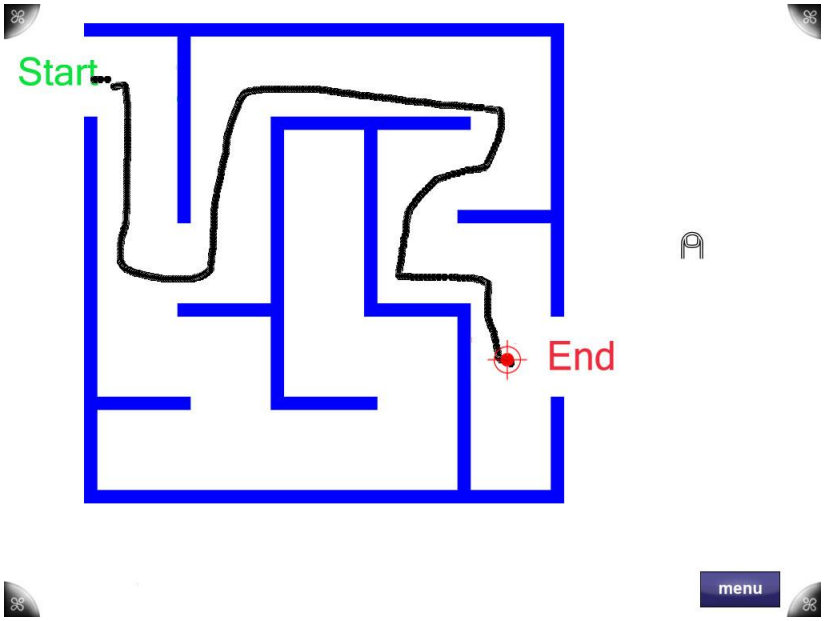
- **Finding the Way**

- Options
  - Various Floor Plans
    - Two Bedroom House
    - Grocery Store
- Info Recorded
  - None – an interactive tool for therapist only
- To Place Person
  - with finger touch
- To Move Person
  - with arrows

9.3.6. Maze



- Maze will appear on the screen (difficulty pre-defined)
- User must start dragging finger at "start" and solve maze by getting to the "finish"



- User shall try to not hit any walls when drawing path
- Activity is complete when user reaches “Finish”

Maze

- Options
  - Difficulty (Easy, Medium, Hard)
    - Each level contains 5 mazes which are randomly chosen to be displayed & randomly oriented when displayed
- Information Recorded
  - Time to Complete
  - Wall Hits
- To Register with Microsoft Surface
  - Finger

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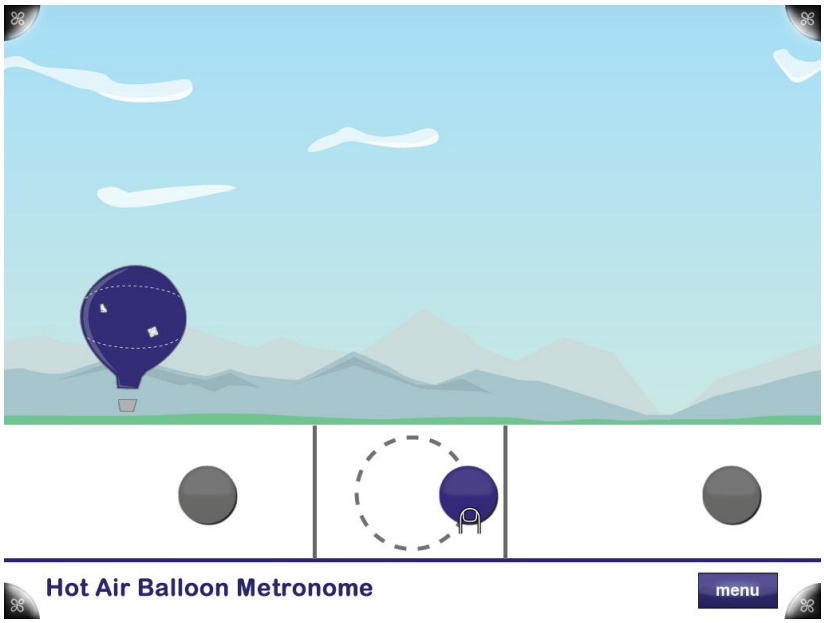
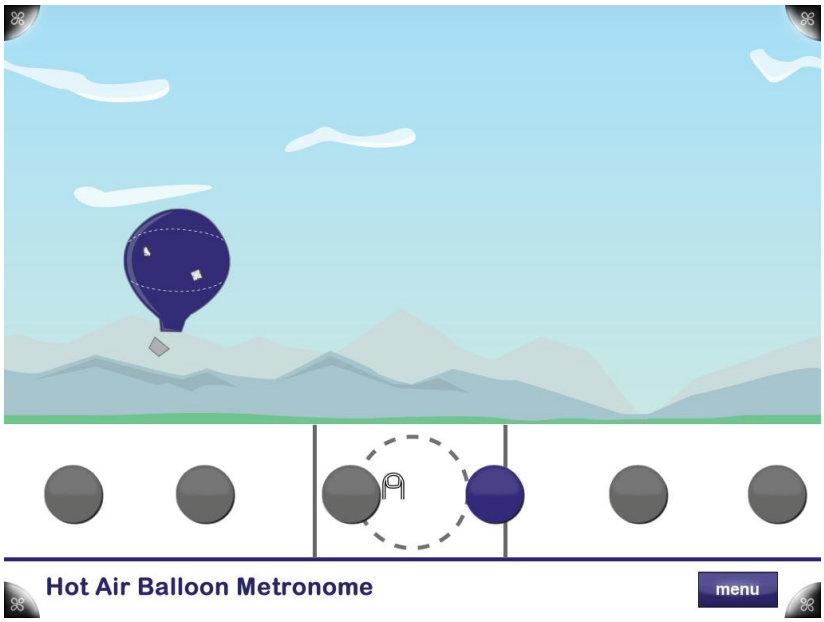
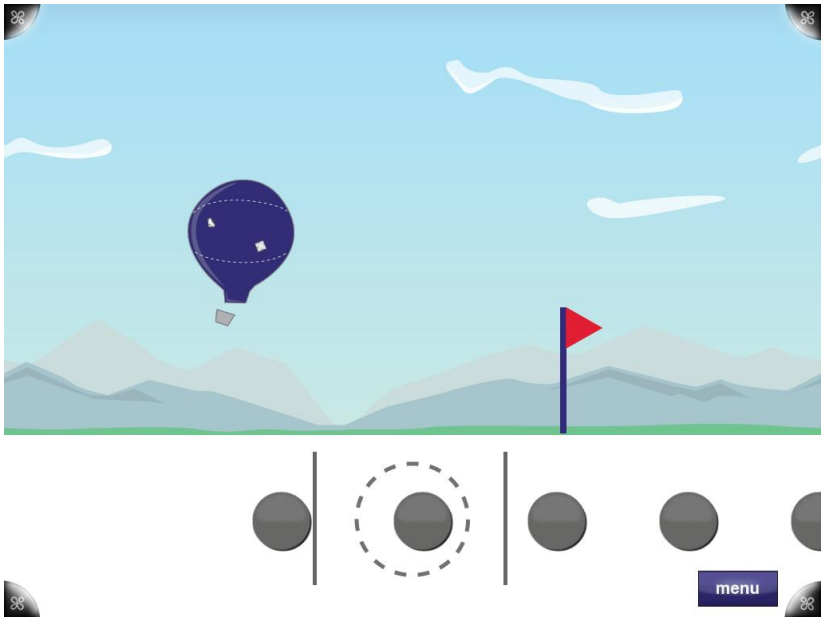
9.3.7. Metronome



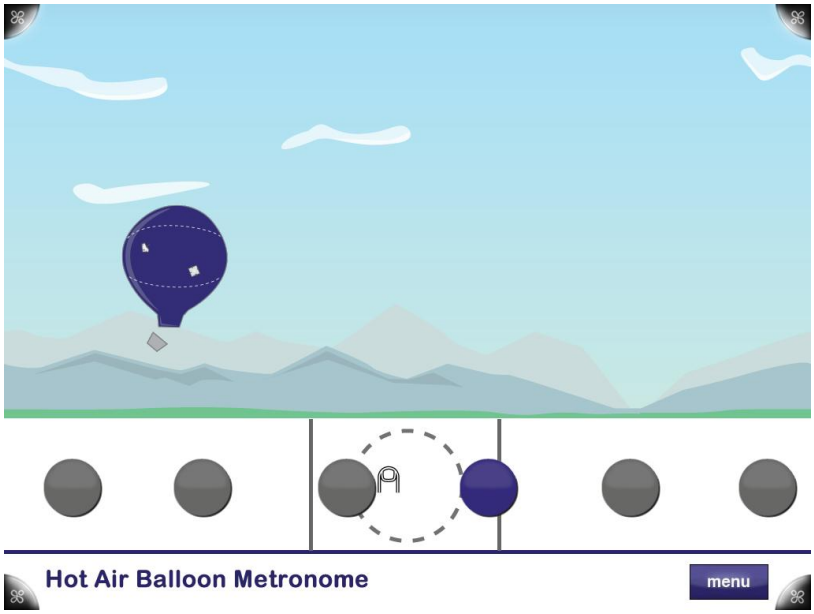
- The goal is to tap on the circles when they move within “Target Zone” the dashed circle in the middle of the bar



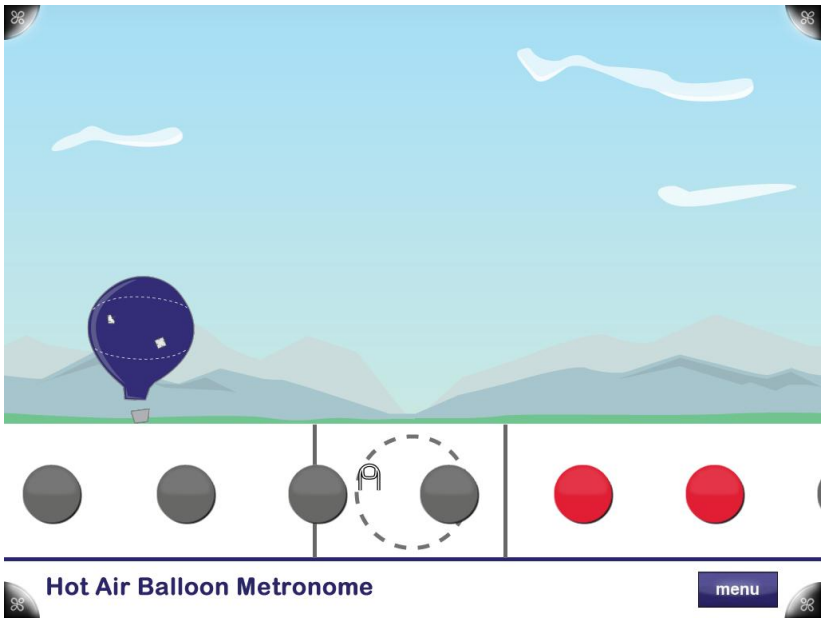
- When the user taps/presses the “Target Zone” in-sync with the pace/”circles” the hot air balloon takes off/increases in elevation



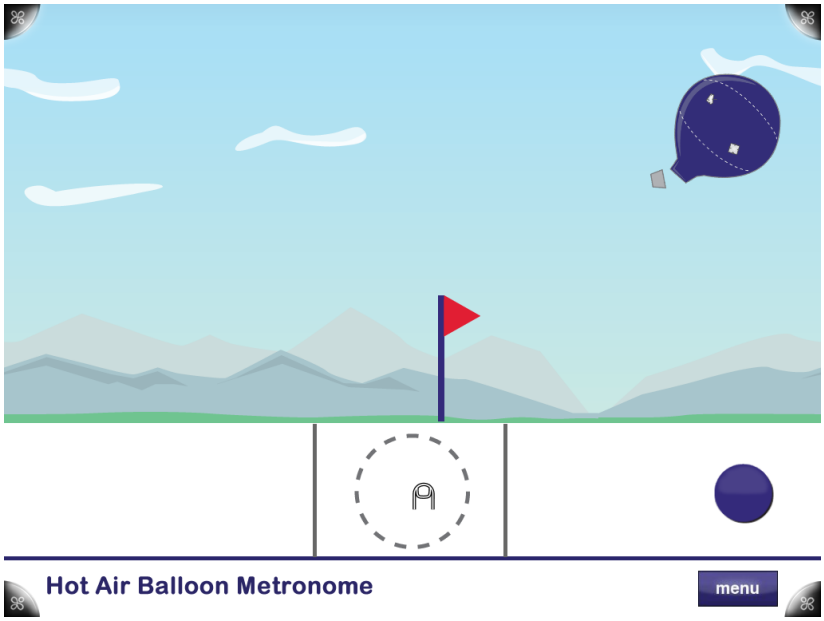
- This is a Interactive Metronome activity, its is made up of a mini video game (top window) that reflects the user's input and the metronome bar (bottom)
- When the activity starts, the pace of the metronome is represented by circles which move across the bar



- When the user misses the pace or presses the "Target Zone" too early, the hot air balloon decreases in elevation or lands on the ground if low enough.



- Metronome pace, length of activity, and other options can be defined in the activity options using TheraLink

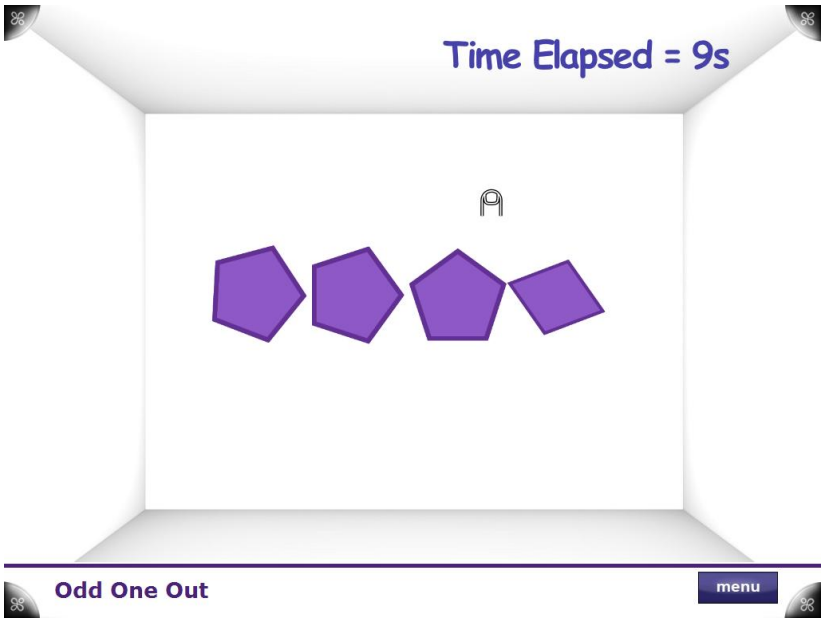


- The activity ends when the time (duration) option that was selected is reached

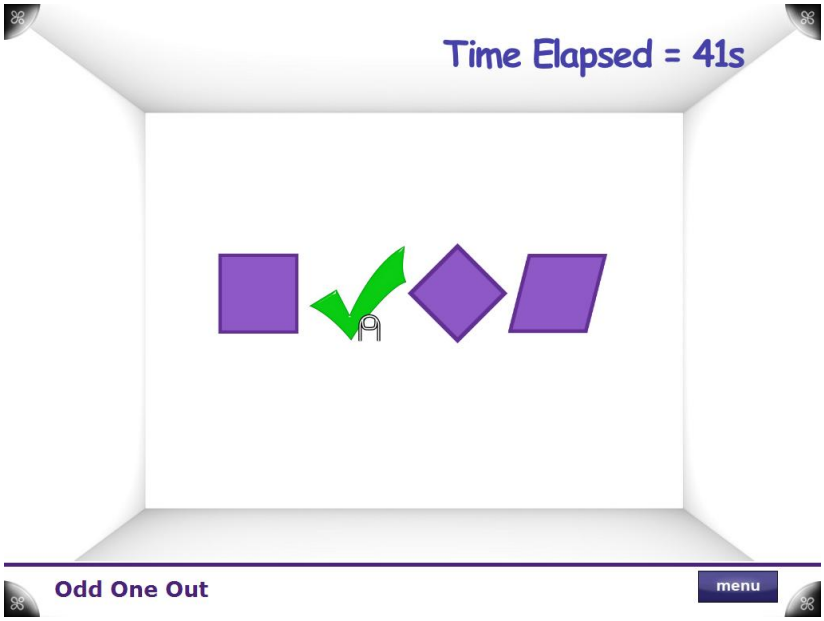
Air-Balloon Metronome

- Activity Options:
  - Metronome pace
  - Length of activity (duration)
- Information Recorded:
  - Number of missed beats
  - Total number of beats
- To Press the "Target Zone":
  - Finger

9.3.8. Odd One Out



- 4 shapes or pictures will appear
- User will decide which image does not belong based on the given set of images
- The user will then touch with their finger which item does not belong in the set displayed.



- Correct answer will be displayed
- The next set of random images will be displayed
- The user will then touch with their finger which item does not belong in the set displayed.

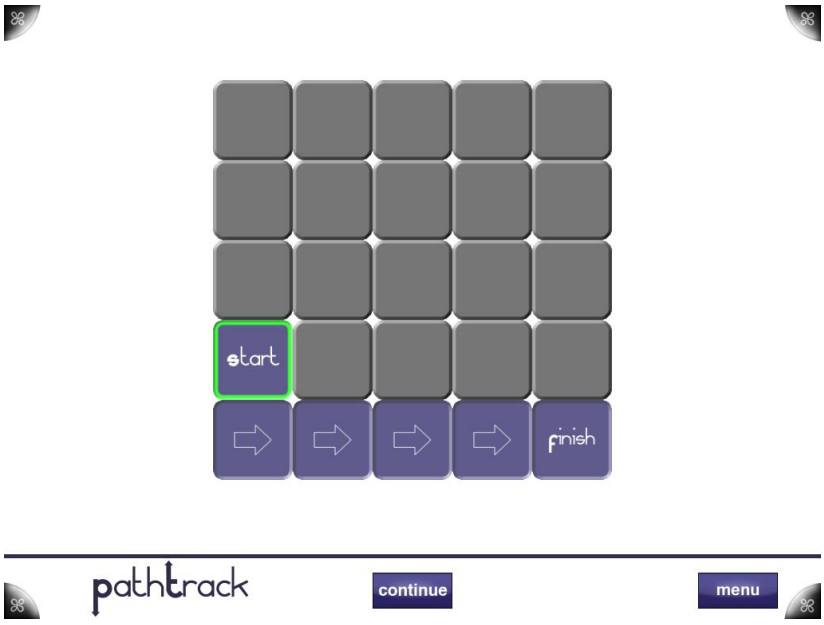
Odd One Out?

- Activity Options
  - Shapes, Pictures (real-life images or line drawings)
  - Categories (if picture option chosen - fruits, cars, animals, etc.)
  - Number of shapes/pictures (3-8)
  - Number of activity instances

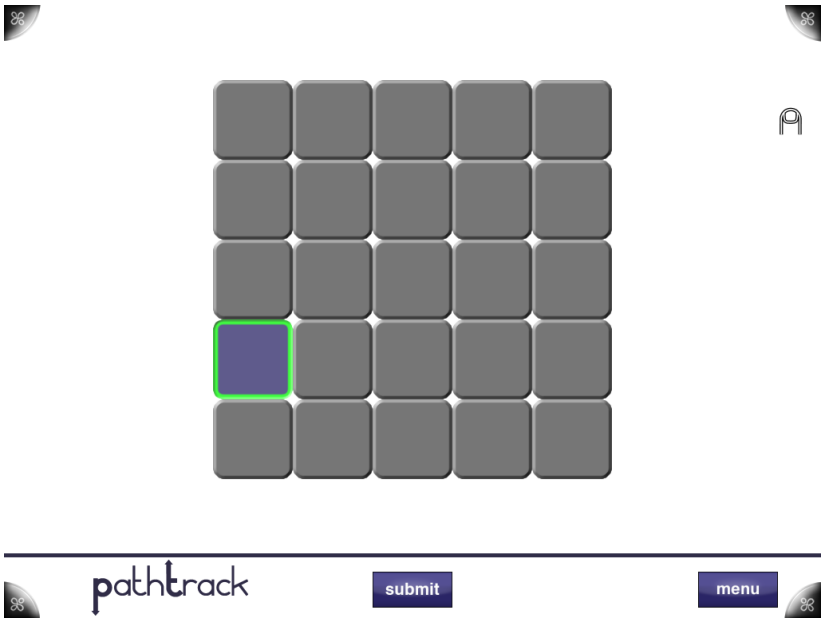
- Info Recorded
  - Number of shapes/pictures used per question (3-8)
  - Accuracy (correct/incorrect)
  - Categories used
  - Length of time taken for a guess

- To select correct image
  - with finger
  - with pen

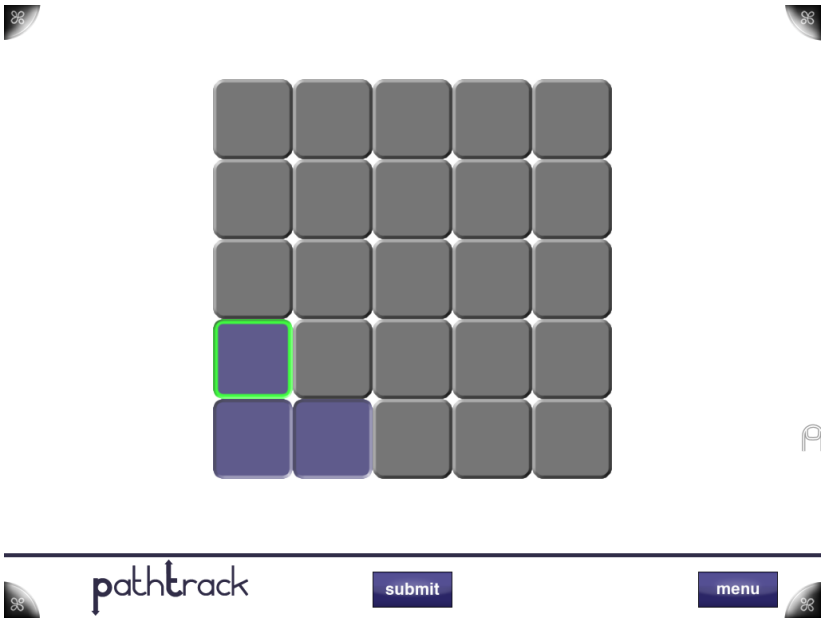
9.3.9. Path Track



- Hand is animated moving from tile to tile through the matrix, to indicate the direction of path
- Path is outlined in a color or a visual marker to indicate where the path that was made
- Button press to clear matrix for user to enter path

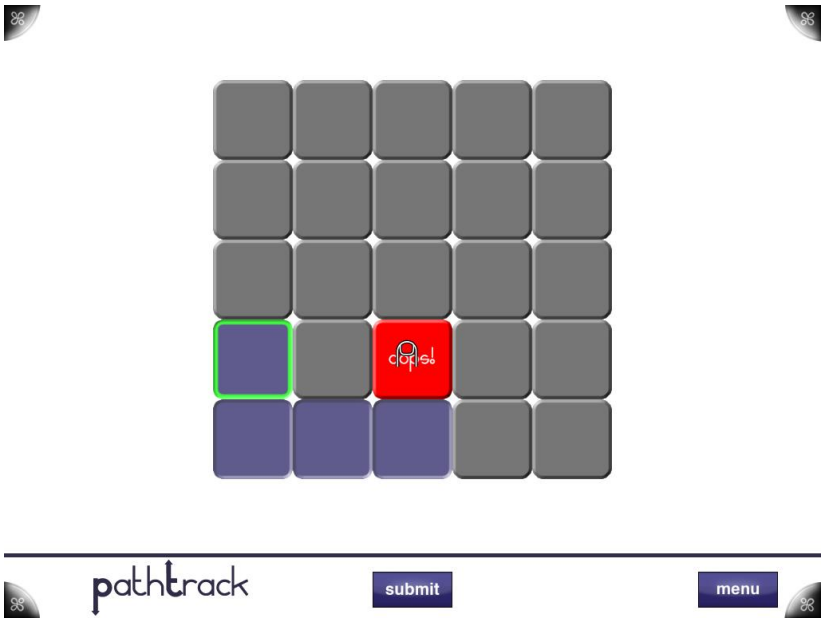


- Data collection starts
- User starts to retrace path from start to finish with finger



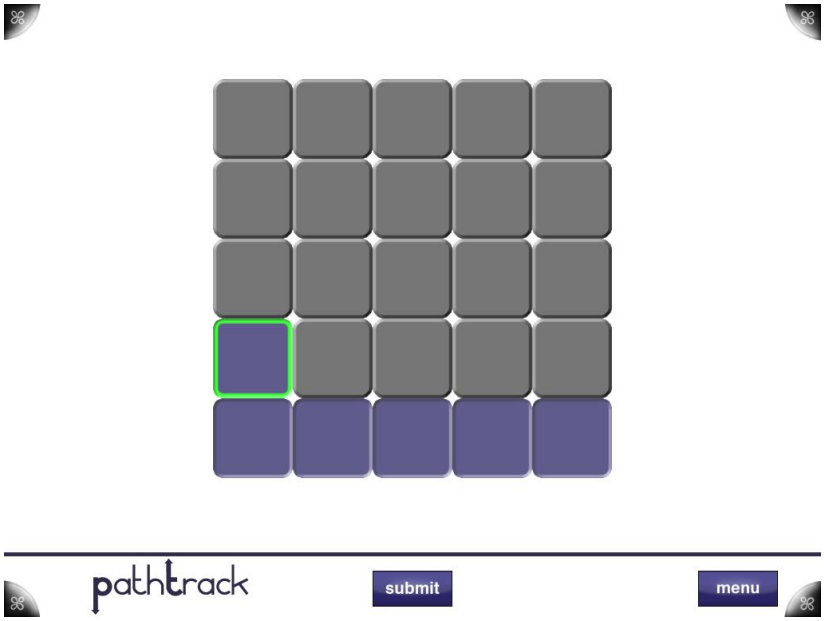
- User can draw paths either by having constant contact (finger to matrix) or individually pressing each tile in the correct order from start to finish
- User's path will be outlined in a color or a visual marker as user draws path
- User's last correct tile is colored darker or marked differently to signify where to continue from

**Path & Drawing Options can be customized*



- If user selects or draws to a tile not in path or is in path, but not in correct sequence, the selected tile will be colored or marked in a way to indicate not in path or incorrect order
- Incorrect tiles will fade back to a unselected default tile

**Options for Error Handling can be configured differently to get desired results (example: Turn off error indicators, so user's path is not skewed by errors)*



- User presses the "Finish" button to indicate path is redrawn and to stop activity/data collection
- If specified in options, Path Recall will restart with the next set of options and path pattern

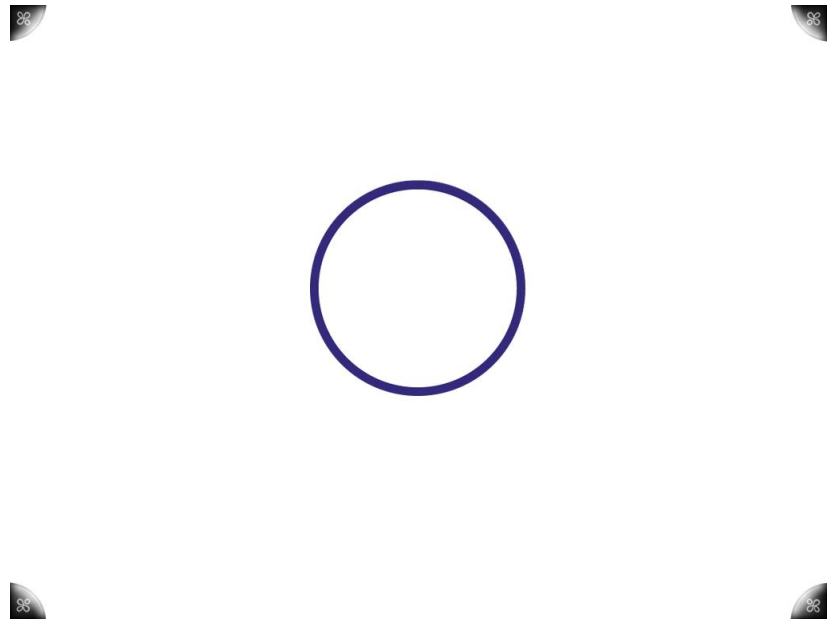
Path Track

- Activity Options:
  - Size of Matrix (# of squares on screen) = (3X3 → 6X6)
  - Path pattern (easy, medium, difficult)
  - Enable/disable error indicators
  - Number of activity instances

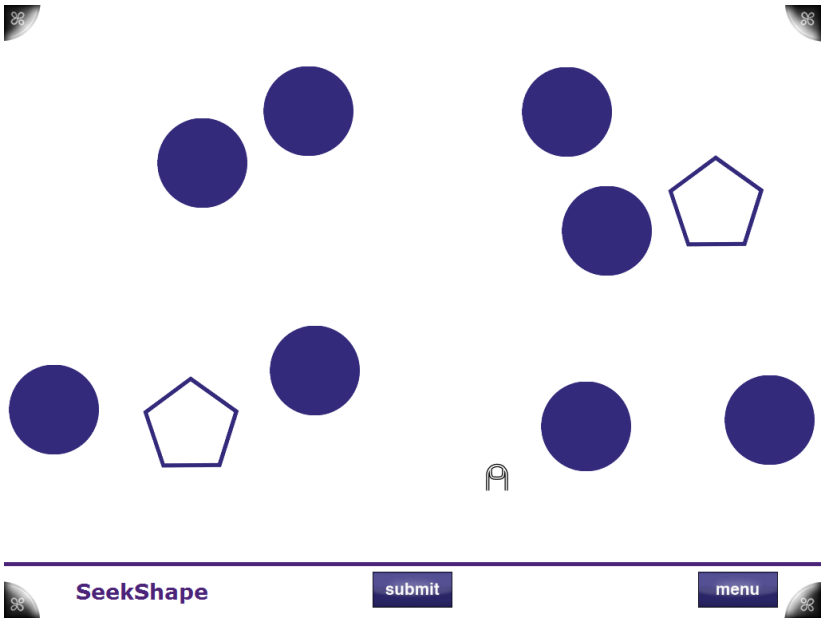
- Information Recorded:
  - Time it takes to complete activity
  - Size of matrix
  - Path difficulty
  - Number of selected incorrect tiles not in path
  - Number of select incorrect tiles not in correct order

- To select/draw path:
  - Finger
  - Physical object

9.3.10. Seek the Shape



- Shape fades in
- Stays on screen for 5 seconds
- Shape fades out

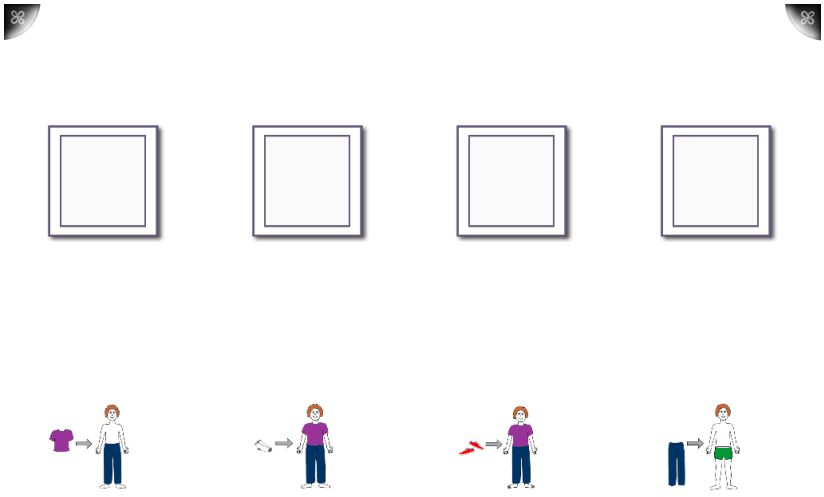


- User must select all instances of the shape appearing on the previous slide
- Once selected, shape changes colors

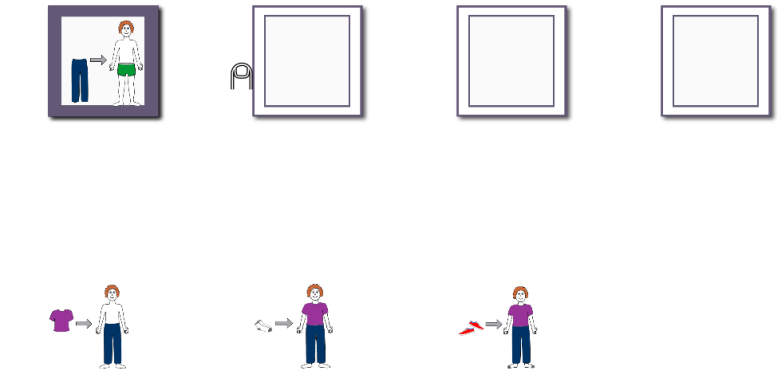
Seek the Shape

- Activity Shape Options
  - Numbers
  - Letters (uppercase & lowercase)
  - Other Symbols/Shapes/Pictures
- Activity Options – when shape selected
  - strike through
  - changes to a different color (MOST IMPORTANT)
- Activity Options - shapes
  - levels (1=very different shapes → x=very similar shapes)
  - # of unique shapes (2-5)
  - # of shapes on screen (20-50)
    - shapes will then be displayed evenly over 4 quadrants with at least one of the "seek shape" in each quadrant
- Info Recorded
  - Time it takes to find all instances of the shape
  - Accuracy
- To select Shape
  - with finger
  - with pen

9.3.11. Sequence



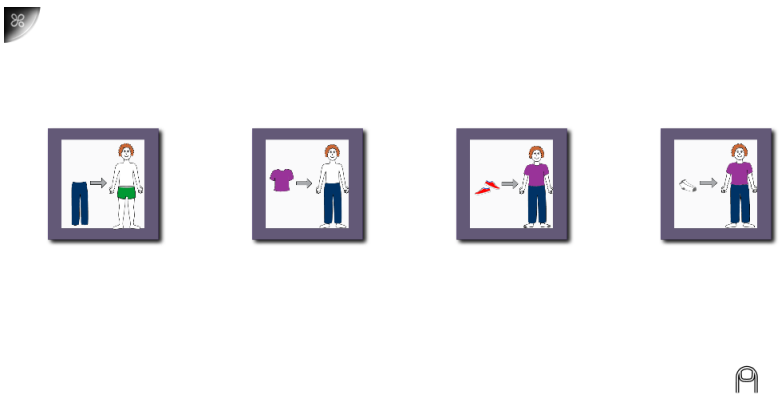
- User must place pictures in logical order by sliding them to their proper place



Sequence

submit menu

- Once money has been entered (user determines how much), they must then enter the letter-number associated with the item they wish to purchase



Sequence

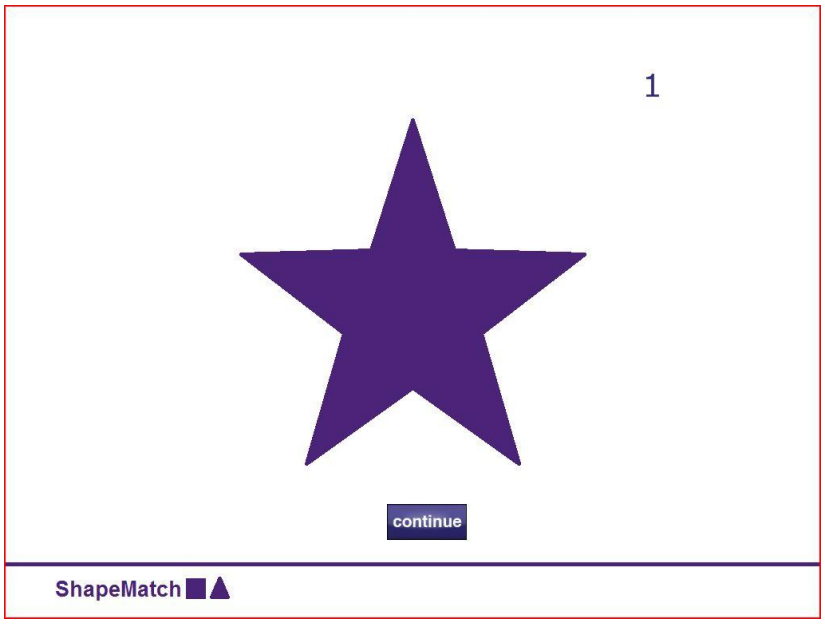
submit menu

- Once the user is satisfied with the order they have created, they must select the “submit” button
- If the order is incorrect, the user will be told to try again (if the option is selected, the pictures in the correct spots will have a drop shadow showing the user which pictures to then rearrange and re-submit)

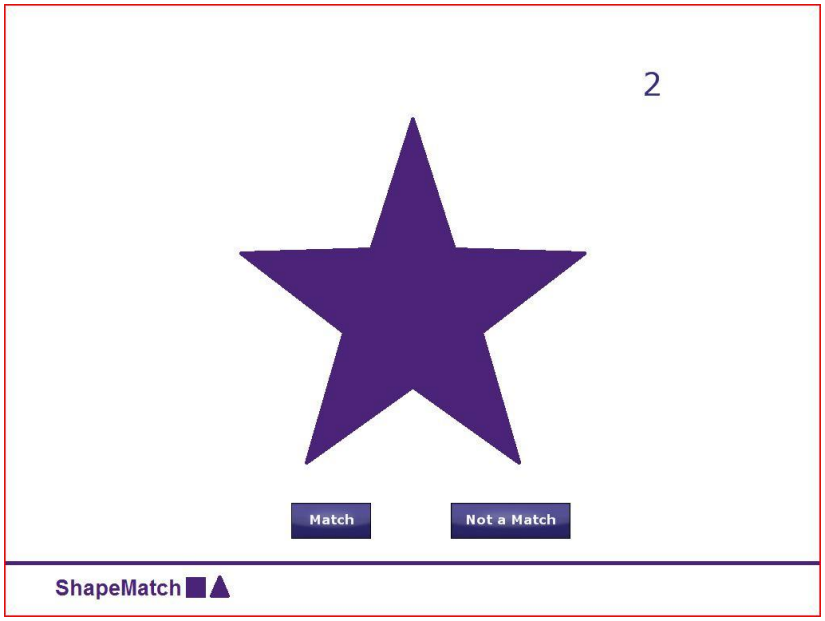
Sequence

- Activity Options
  - Words/Only Pictures
  - Type of Sequence (Brush Teeth, Put on Clothes, Mail Letter, Make Spaghetti)
  - Apply drop shadow on correct (after submit)
- Info Recorded
  - Time it takes to complete activity
  - Number of incorrect placements
- To move pictures
  - with hand

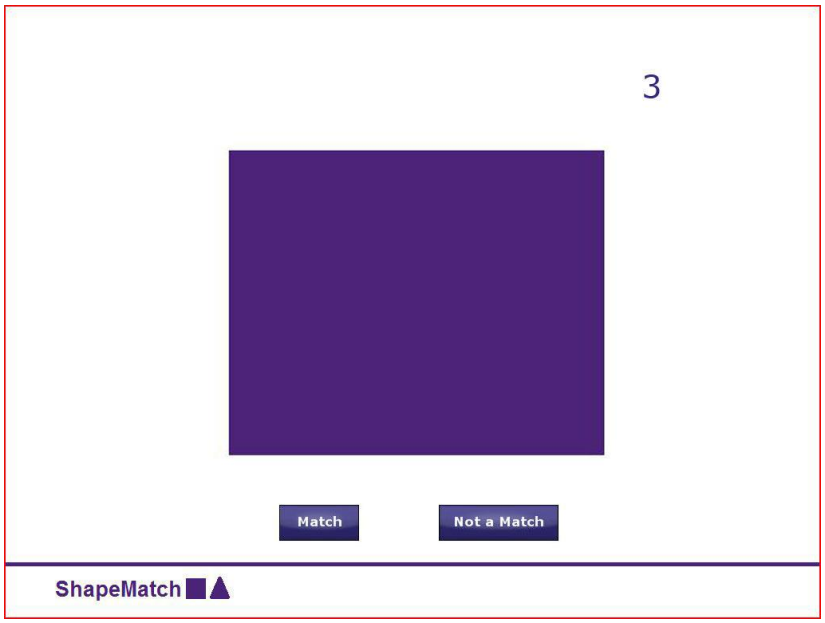
9.3.12. Shape Match



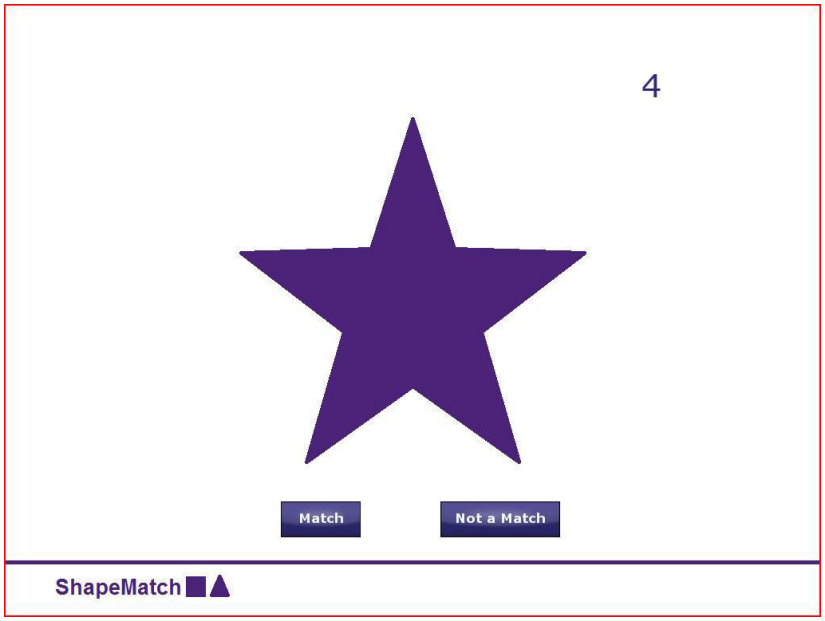
- First shape appears
- "continue" button pressed to begin data collection



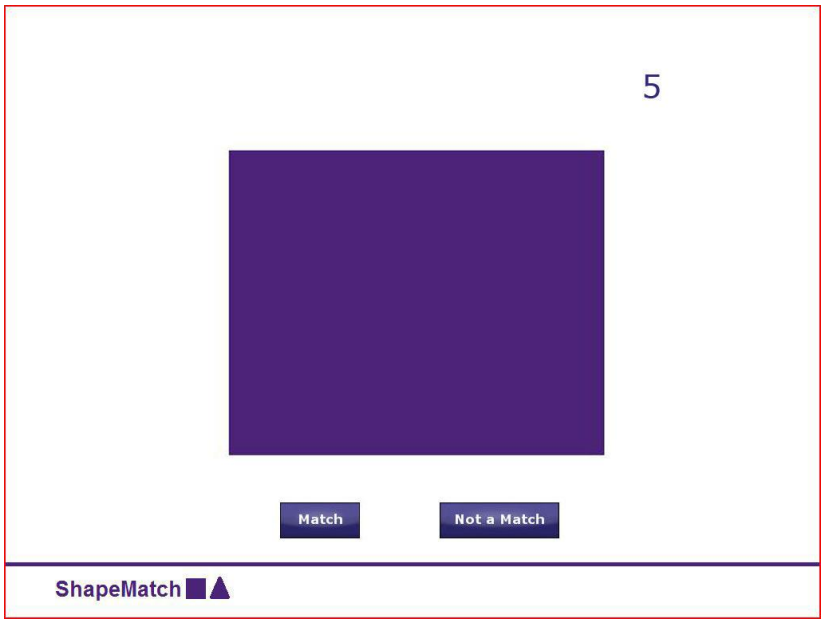
- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the "YES" or "NO" button



- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the "YES" or "NO" button



- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button

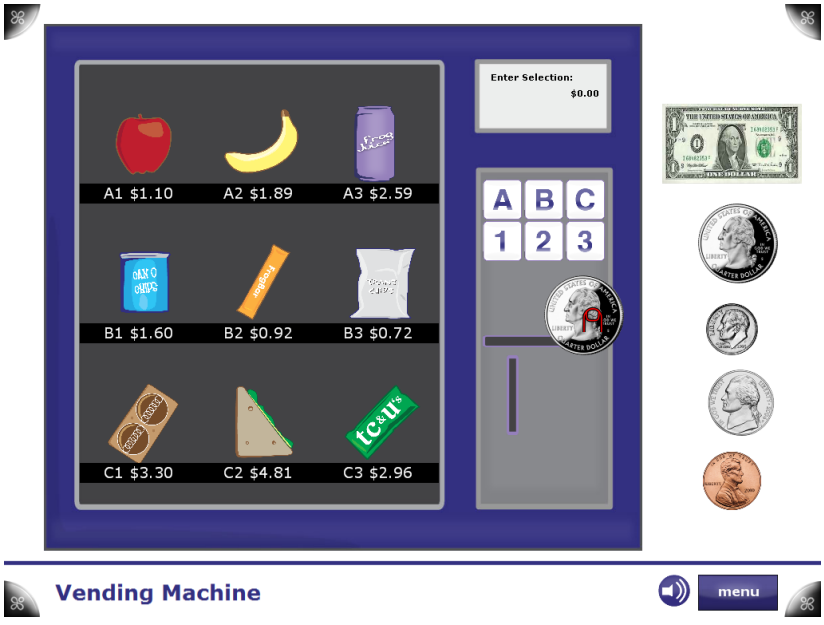


- Next shape appears
- User must select if the previous shape matches the current shape
- User will use the “YES” or “NO” button

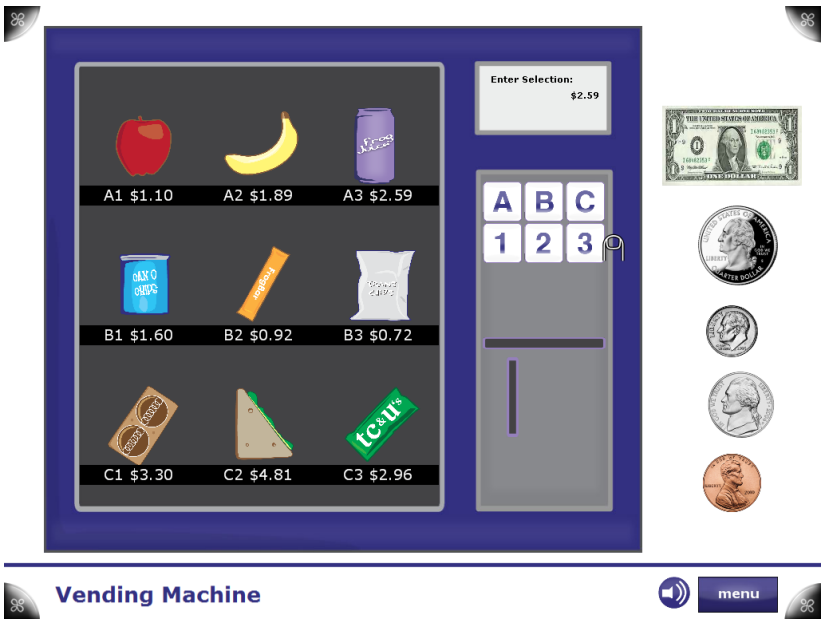
Shape Match

- Activity Options:
  - Shapes, Numbers, Letters, Pictures (line drawing or photograph) (only 2 unique)
  - # of shapes in the set (5, 10, 15, 20)
  - Number of activity instances
- Information Recorded:
  - Time it takes to complete activity
  - # of correct/incorrect answers
  - Whether shapes, numbers, letters, or pictures
  - # of shapes in the set
- To select:
  - Finger
  - Pen

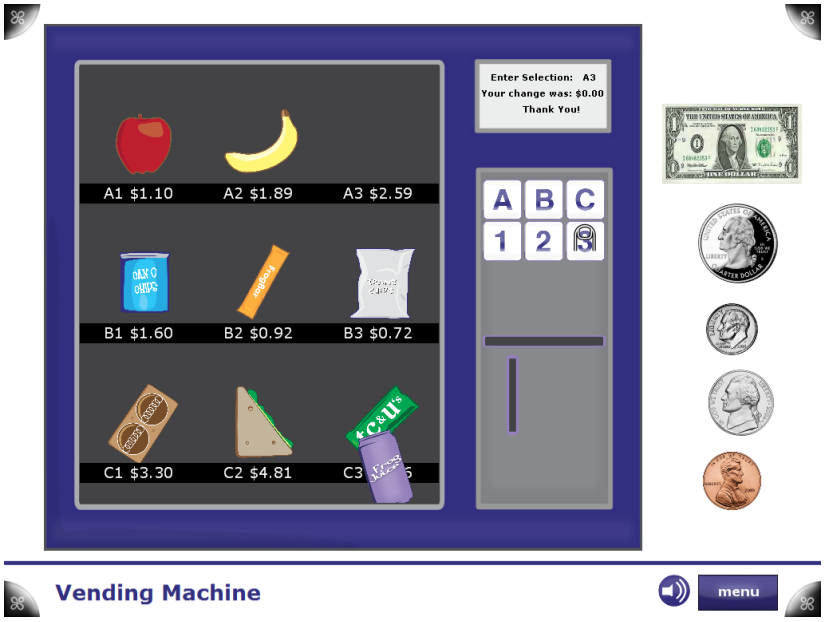
9.3.13. Vending Machine



- User will choose which item they wish to purchase
- User will drag money from tray to coin/dollar slot(s)



- Once money has been entered (user determines how much), they must then enter the letter-number associated with the item they wish to purchase

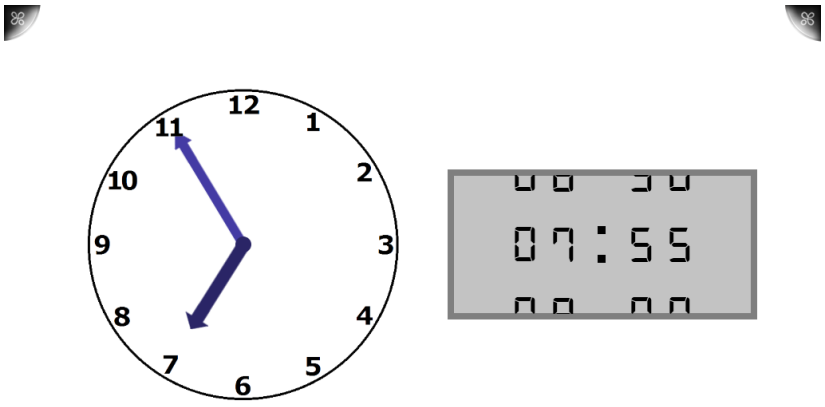


- If correct amount entered, item selected will “spin and drop” as if purchased
- If incorrect amount entered, display will show an error and count as incorrect

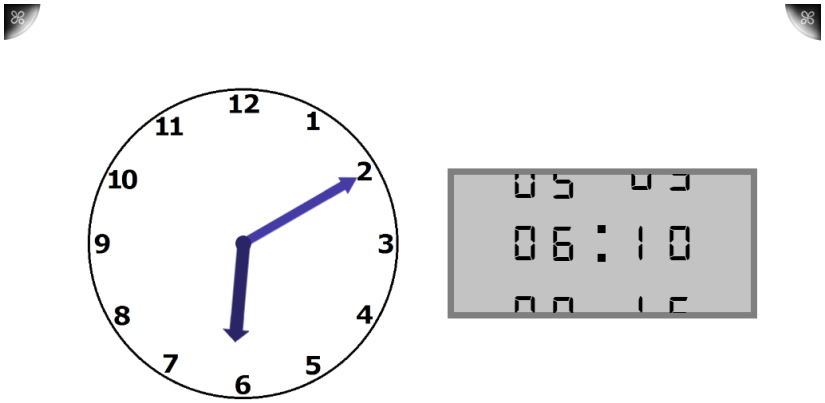
Vending Machine

- Activity Options
  -
- Info Recorded
  - Time it takes to complete activity
  - Number of incorrect
- To select Shape
  - using sponge (something to grasp)
  - with hand

9.3.14. What Time is it?



- Digital clock wheels are locked
- User must drag hands of analog clock to match digital time
- Press "Submit" button to check for accuracy
  - If wrong, try again!
- Repeat for # of times specified by therapist in Web App



- Analog clock hands are locked
- User must spin digital clock wheels to display time on analog clock within red area
- Press "Submit" button to check for accuracy
  - If wrong, try again!
- Repeat for # of times specified by therapist in Web App

- **What Time is it?**

- Options
  - digital → analog
  - analog → digital

- Info Recorded
  - Time it takes to complete activity
  - Is time correct? - Accuracy
    - Analog # correct/incorrect
    - Digital # correct/incorrect

- To move arrows/wheels
  - with finger

9.3.15. Wipe the Table

menu

- Splat fades in with # (not necessarily in correct order)
- Stays on screen until user “wipes” (user must determine if number on screen is numerically next)
- Splat fades if user “wipes” off

menu

- Splat fades in with #
- Stays on screen until user “wipes”
- Splat fades if user “wipes” off

menu

- Splat fades in with # (4 does not come after 2)
- Stays on screen for ?? seconds or until user “wipes” (if they wipe, get marked incorrect)

menu

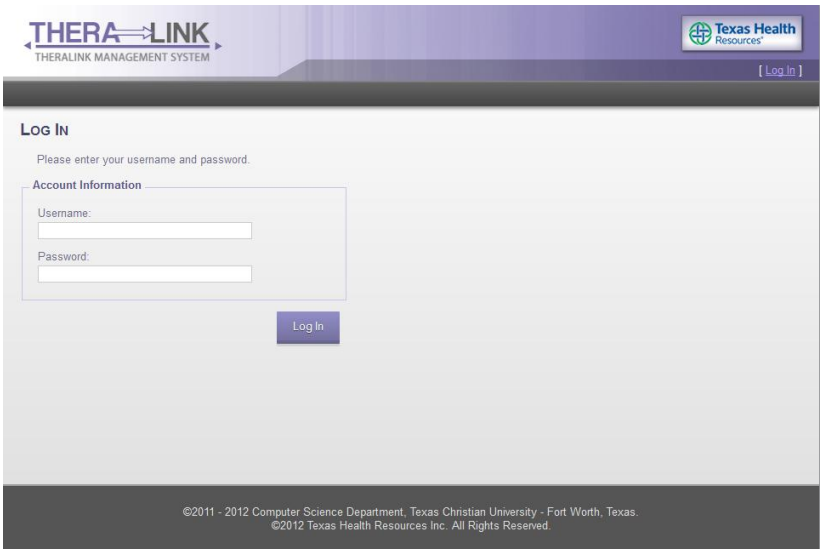
- Splat fades in with #
- Stays on screen until user “wipes”
- Splat fades if user “wipes” off

Wipe the Table

- Activity Options
  - Ordered/Unordered sequence of blobs
  - Tap/Wipe blobs away
  - Black & White or Colored blobs
  - Total number of blobs
  - Wait Time between different blobs
  - Fade time before blob disappears without user input
- Info Recorded
  - Time it takes to complete activity (1-10, etc.)
  - Accuracy
- To select Shape
  - with finger
  - using sponge (Any tagged object)

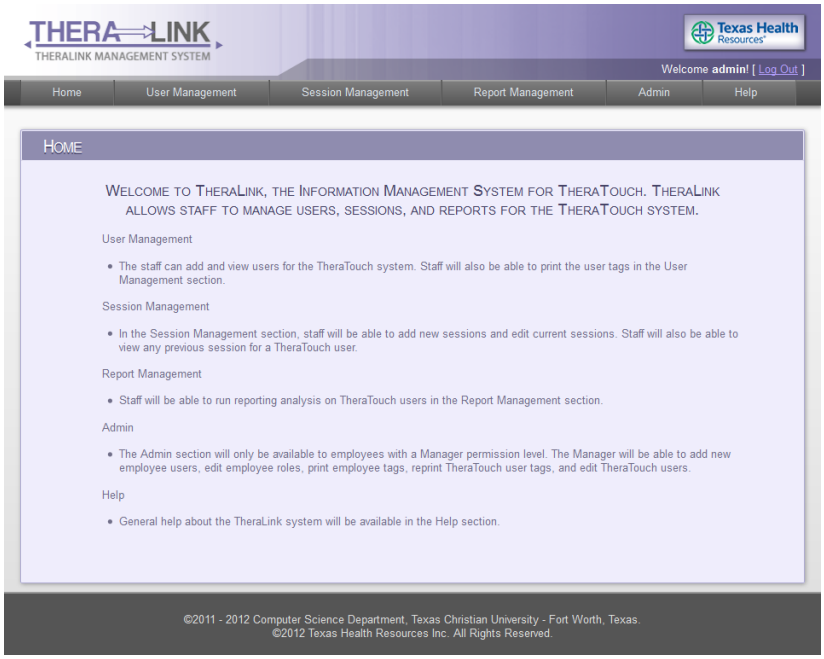
9.4. Clinician Web Application

Login Screen



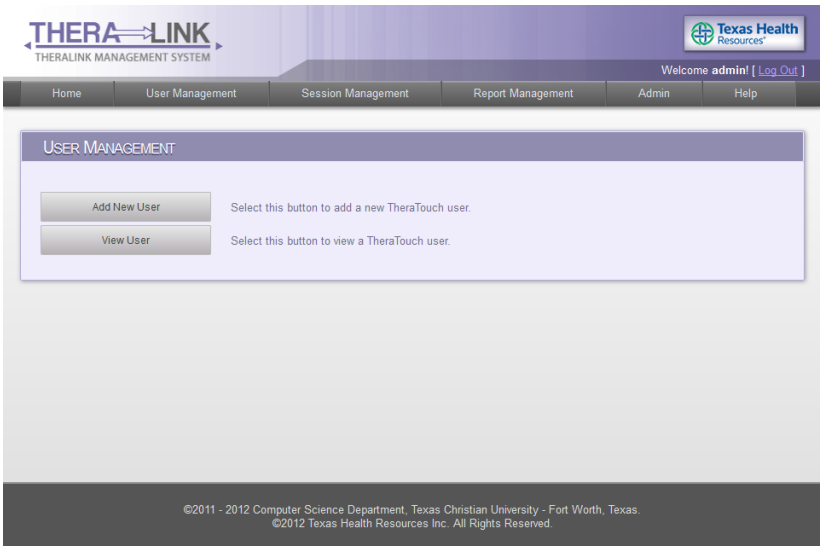
This is the login page, which is presented to the user at any they attempt to access TheraLink without already being logged in. It is also displayed to the user upon logging out.

Home Screen



The home screen is the first screen displayed after a successful login attempt. It serves as a welcome screen and gives a brief overview of the purpose and functions of TheraLink.

User Management Screen

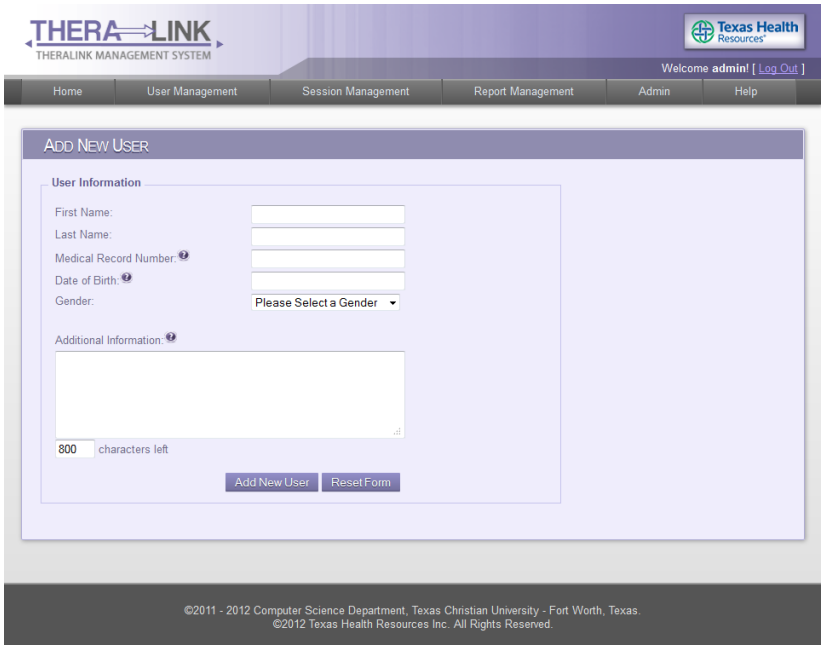


User Management contains links to Add New User and View User.

Clicking the Add New User button will take the staff member to the Add New User screen.

Clicking the View User button will take the staff member to the View User screen, after entering a user's TheraID or Medical Record Number.

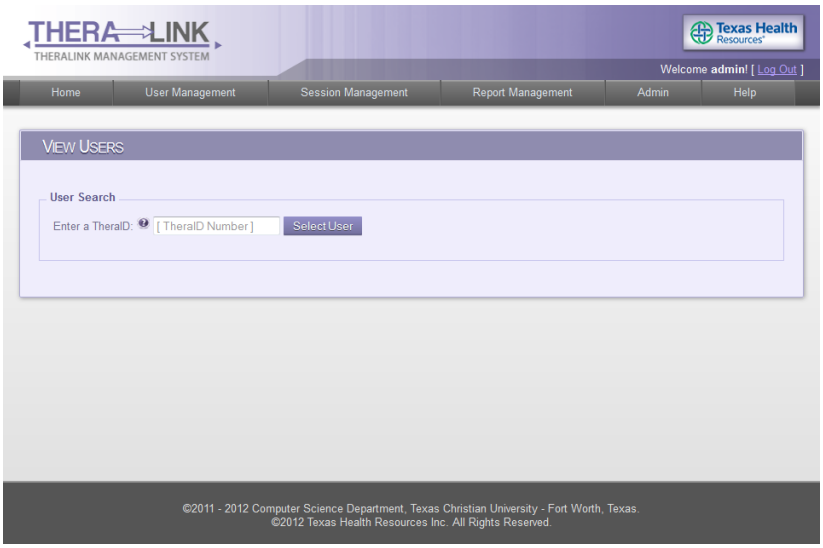
Add New User Screen



The Add New User screen is accessed from the navigation menu, or by clicking Add New User from the User Management screen.

The staff member will enter the First Name, Last Name, Medical Record Number, Gender, Date of Birth, and any additional information about the user. After clicking Add New User at the bottom of the page, a new TheraID will be assigned to the created user and stored with the Medical Record Number and Year of Birth. First Name, Last Name, Gender, Year of Birth, and Additional Information are not saved in the database. All fields will appear on the user's tag that can be printed from the next screen.

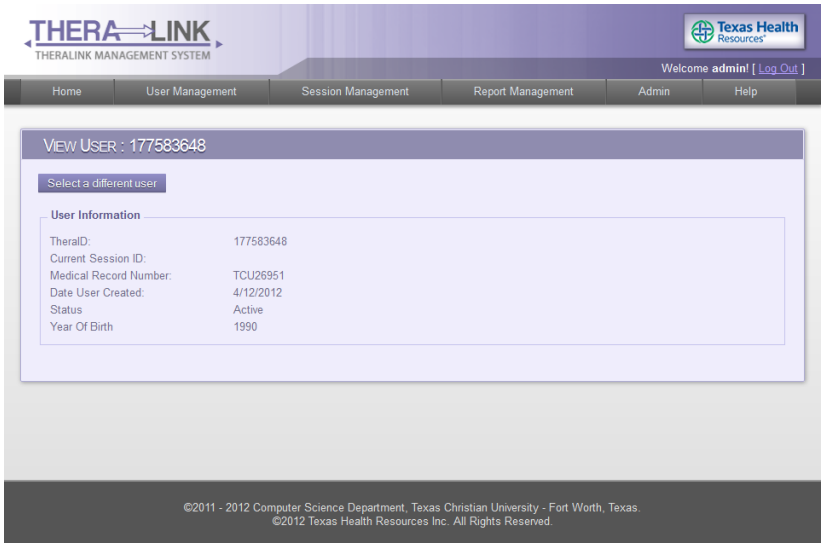
View Users Screen



To get to this page, click View User on the user management page, or hover over the user management link and click View User from the drop-down menu.

The staff member will enter a TheraID or Medical Record number into the text fields and then press Select User to pull up the View User screen.

View User Screen



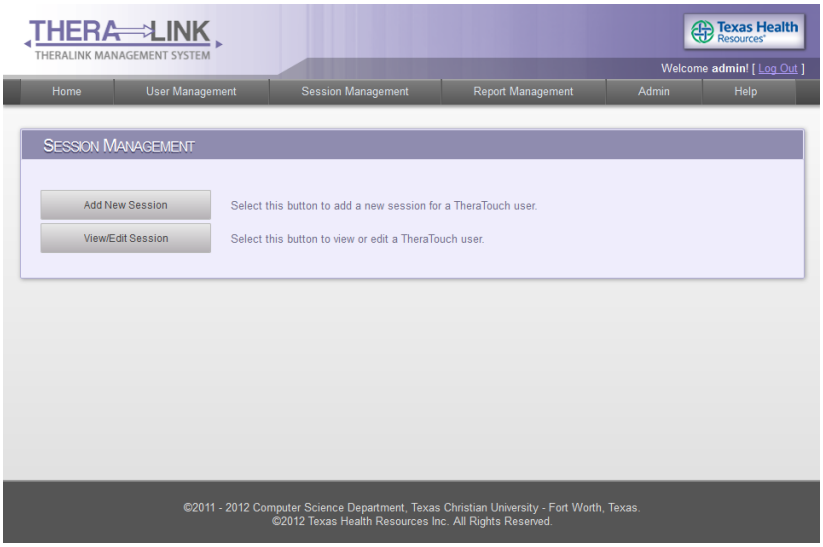
This page is only accessed from the View Users screen after entering a valid TheraID or Medical Record Number. It displays the information saved to the database about the user.

Activate User/Deactivate User

To get to this page, click Admin from the navigation menu, then click the Edit TheraTouch User button.

This page will activate or deactivate a user. The staff member must enter the appropriate TheraID for the user they wish to activate or deactivate, and then press the relevant button.

Session Management Screen

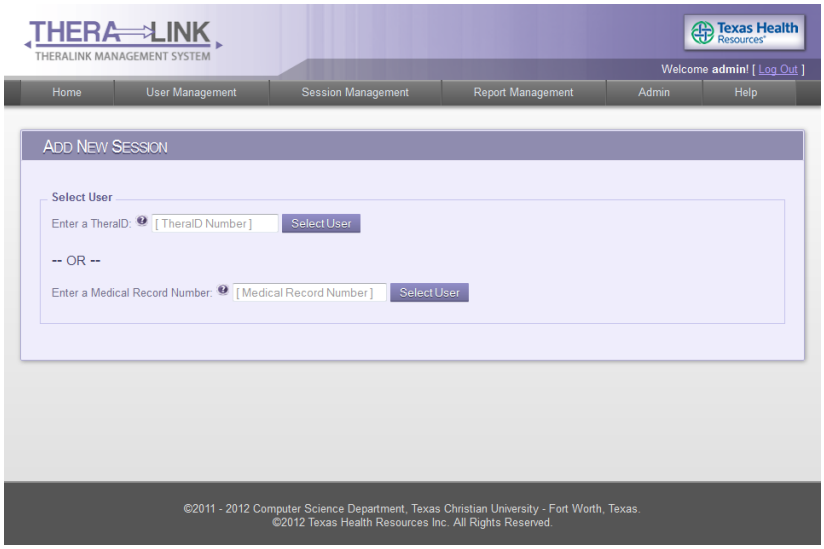


To get to this page, click Session Management from the navigation menu.

Clicking the Add New Session button will take the staff member to the Add New Session page.

Clicking the View/Edit Session button will take the staff member to the View/Edit Session-Select User page.

Add New Session Screen



To get to this page, click Add New Session on the session management page, or hover over the Session Management link and click Add New Session from the drop-down menu.

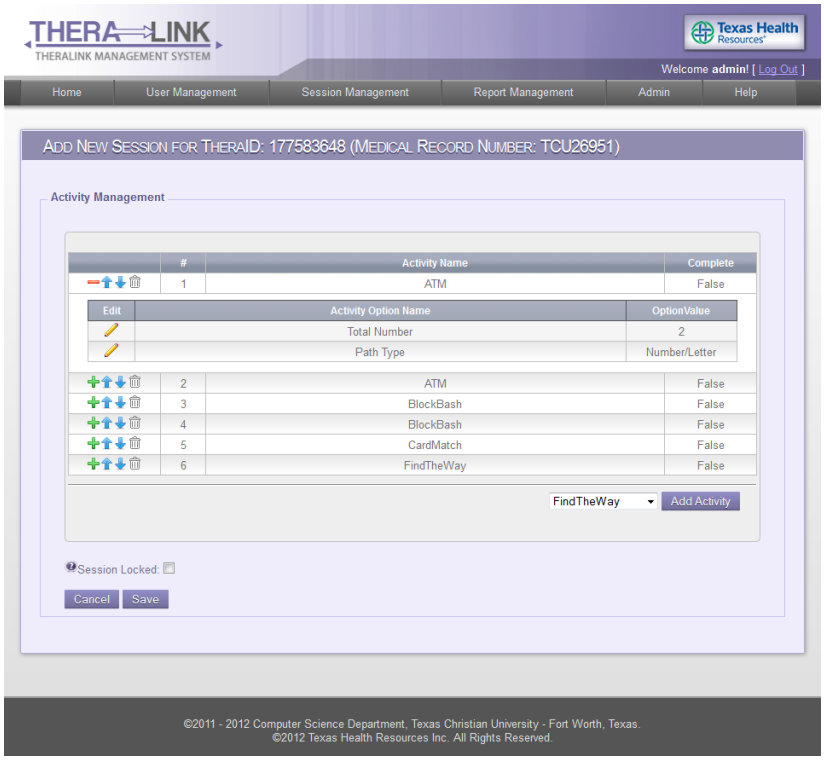
The staff member must select a user to add a session for by enter entering a TheraID or Medical Record Number.

Edit Screen

The staff will get to this page after selecting a user from the View/Edit Session-Select User page.

Staff members can choose to view/edit a current session, or view previous sessions. If no current session is defined for a user, they will have the option to copy a previous session (if one exists) or created a new session.

Edit Session, Add New Activity Screen



Click the Add Activity button to add activities to the interactive table, after selecting the activity they wish to add from the dropdown list. When the staff clicks this button, it will add a new activity row to the table at the bottom.

To edit the options for an activity that has been added, the green plus icon must be clicked. Activities can be reordered by clicking the up or down arrows, or deleted from the session by clicking the trash can icon.

When the clinician is satisfied with the session, they should click the Save button to save the session to the database. If the Cancel button is pressed, the staff will return to the session management page and the session will not have any unsaved changes committed to the database.

Edit Activity in Session Screen

Editing a session uses the same user interface as adding a session.

Report Management Screen

The Report Management screen shows a list of reports that can be generated. There are three categories of reports: View Activity Data, Time vs. Accuracy, and User Progress Reports.

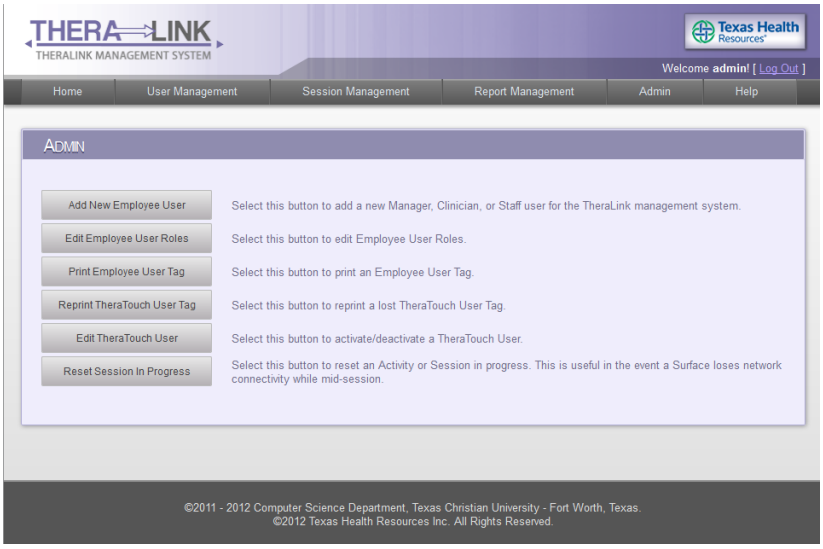
View Activity Data

To get to this page, click the Report Management link in the navigation bar, and then click View Activity Data.

This page will display all the data collected from each session that has been completed.

This page allows the data to be sorted and filtered by Session ID, Activity Sequence Number, Activity Result ID, Activity Name, and Activity Data.

Administrative Functions Screen



The Admin page contains functions only accessible by Managers. Clinicians will not see the Admin page in the navigation menu.

Adding new staff members can be done from the Admin page. After clicking Add New Employee User, the clinician will fill out the username and password for the new staff member, and assign a permission level.

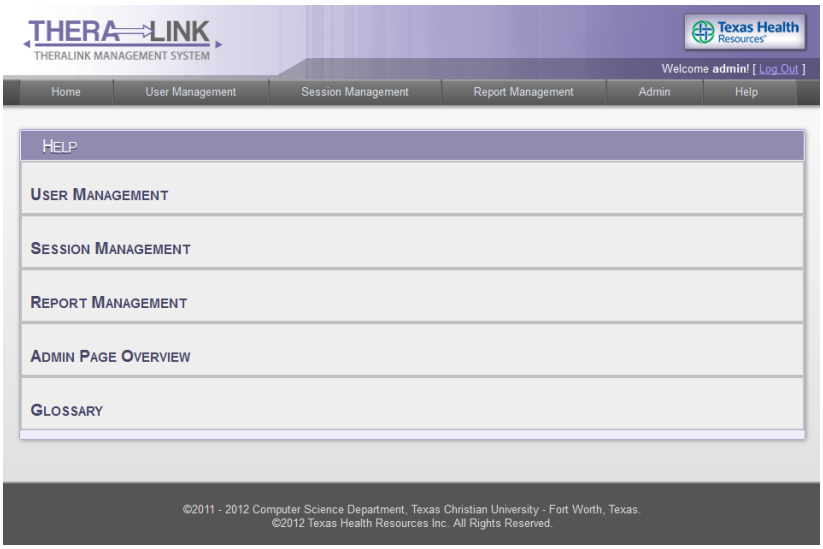
The Edit Employee User Roles button displays a list of all employee users, and allows a Manager to edit each user's role (Manager or Clinician). Managers can also remove a staff user. Managers can't edit their own role, and can't remove their own account. This ensures there will always be one manager account for TheraLink.

Print Employee User Tag will reprint the tag needed to bring up the menu in activities during a session.

Reprint TheraTouch User Tag will allow a manager to reprint a lost user tag. The manager will need to know the TheraID or Medical Record Number for the user, and re-enter all the data that was needed when originally creating the user.

Reset Session In Progress allows a Manager to mark a session as not in progress. This is used if the Surface loses database connectivity during a session.

Help Screen



To get to this page click the Help link in the navigation bar.

The User Guide button will open the web application user guide. Information about difference aspects of TheraLink can be accessed by clicking on the relevant topic.

10. Appendix

10.1. Appendix A – Use Case Model