Documentation

Sample #2 – Final Year Project:

The project is a dress up game. The game makes use of the dummy assets provided which are added to each screen. The game is played on the browser and therefore be played on mobiles, desktops or any device that can open browsers.

Code Files and Resources:

This folder contains the following folders and their contents:

```
-res
  |-font
  |   |-BradyBunchRe.ttf
  |-assets.xml
  |-(image files used to create the game)
-src
  |-CharReady.js
  |-DressUp.js
  |-MainMenu.js
  |-Photoshoot.js
  |-resource.js
  |-ScreenHandler.js
  |-SelectChar.js
main.js
project.json
```

The game flow of the project is as follows:

The function of the individual files in the project are given below, in the order of game flow:

Resources:

The res folder contains all the assets required for the game which include the font file, the images and the assets.xml file. The XML file contains all the information associated with the image files, namely the objPath (which determines the image required), the width, the height, the x and the y positions, if it is required in an animation (which isn't used) and the dp which acts as an identifier for the image.

Code files:

project.json – This file is used to set the global configuration of the game and is modified to customize some behavior. Each field in this file has been explained in comments within the file itself. The path of each JavaScript file added to the game needs to be entered into the "jsList" field.

main.js – This is an existing js file which is called first when the game starts. Multiple parameters, including the resolution can also be set in this file. It is used to run a new instance of a scene which creates a new layer. For this game the ScreenHandlerScene is run which creates a new layer called the ScreenHandler and then the game runs.

resource.js – This file is created to store the paths of all the assets. A name is associated with each asset and is stored in an array. To access the assets we make use of this array.

ScreenHandler.js – The ScreenHandler.js contains the ScreenHandlerScene which creates the scene for the game. It also creates the root layer of the game which is the ScreenHandler. This layer is used to transition between the different layers of the game by removing the current screen and all its children and adding the next screen with its elements.

MainMenu.js – The MainMenu is the first screen that is loaded by the ScreenHandler and which is visible to the player. It shows the splash screen of the game and prompts the player to tap on the screen to move to the next screen.

SelectChar.js – After the MaainMenu, the SelectChar screen appears and prompts the player to choose a character. The 4 character selection buttons along with the continue button are displayed. When clicking on a character button, a border appears around it to show that it is selected. After choosing the character, the player clicks on the continue button which takes the player to the DressUp screen. The selection is stored in a global variable and hence can be used by the subsequent screens.
DressUp.js – After loading the screen, we declare the charDP with which we access values of correct assets in the assets.xml file. We display the character and some basic starting clothes, i.e. the top and the bot for the character. After this, a starting panel that holds the clothing items are generated just outside the screen along with the tops which slides into the screen to give a pop in effect. Then the 5 buttons at the bottom that are used to toggle between the clothing items are added. When clicking on a button, it gets highlighted, the previous panel and the clothing items on it are removed and a new panel with the clothing items, according to what's written on the button, slide into view. The change character and ready buttons are then added at the bottom right of the screen. Clicking on either of them displays a pop up. The change character pop up ask the player if they are sure they wish to change characters. Selecting yes transitions back to the previous screen whereas selecting no simply removes the pop up. The pop up for ready button prompts the player to confirm their action and selecting yes takes them to the next scene and again selecting no removes the pop up. The event listener is used to check for beginning of the touch, if the touch is moved, i.e. dragged across the screen and when the touch ends. When the touch begins, if it occurs on one of the item in the panel, it records which item it touched. It also creates a copy of the item touched which is a new image that can be dragged. When the listener detects that the touch is moved, the position of the new image of the item is updated to move along with the touch. At the end of the touch, the location is recorded. Depending on the item being dragged, if the touch ends on the correct part of the body of the image of the character, the item is added or replaces the current item. The list of final items is stored in an array to be used in the future screens. After finalizing the character's outfit, the player goes to the next screen which is the CharReady screen.
CharReady.js – This file loads the CharReady screen. The 4 background buttons are first added to the bottom of the screen which allows the player to change the background of the screen. Then the character that the player has selected is displayed and the clothing items that were chosen in the previous screen are added. After this, the remaining 3 characters are displayed on the screen and then the values of their clothing items are randomly generated and added onto them. An array named "q" is used to store the depth value of each clothing item to display them consistently. Finally the click photo button is added to the bottom right of the screen which is used to take a screen shot. When this button is clicked, the background buttons along with the click photo button are removed and the rest is captured and stored for use and then the final screen is called.
Photoshoot.js – The Photoshoot screen is loaded by this file which is the final screen. The screen shot that was taken in the previous screen, of the previous screen is loaded here and displayed with a slight tilt. A white rectangle is added behind the photo with a similar tilt and acts like a frame to the photo. Two buttons are added at the bottom right of the screen. While the first button, which is the save button, has no actual functionality, it displays a pop up saying that the photo has been saved. The last button is the replay button which takes the player back to the beginning of the game.

Note - The resFactor function used is added to manage the position of elements in the screen for different resolutions. Since the game was assigned to work in resolutions having the aspect ratio of 4:3 and 16:9.

Output Images:
This folder contains the image files showcasing the output the code file generates and contains the following files and its contents:
-1) Main Menu.png
-2) Select Char.png
-3) Dress Up.png
-4) Dress Up Change Clothes.png
-5) Dress Up Confirm.png
-6) Char Ready.png
-7) Char Ready Changed Bg.png
-8) Photo Shoot.png

The various screens that were described are seen in the Output Images. The first scene is the MainMenu screen where the player is prompted to tap the screen to continue. The next screen, which is the SelectChar screen, prompts the player to choose a character. The player can make or change a selection and then continue on to dress the character up. In addition to the screens, the effects they have upon player interaction are also shown. Considering the 3 DressUp images, the first of them shows the screen has just loaded and the tops panel displayed with the character is wearing the default clothes. The second one shows the player has selected the Gears button and that panel is displayed. The character is dressed up in various selections from the list of clothing items and the second Gear item is shown as being dragged across the screen. In the final DressUp Image, the player has clicked on the Ready button and is prompted to confirm their action. The player also has the option to go back to the previous screen and change the selected character. The CharReady images show the 4 characters standing side by side with the selected character in its chosen outfit, while the others have a randomly generated outfit and the images also highlight that the player can change the background to any from the given selection. The final screen displays the screen shot of the 4 characters along with the selected background and marks the end of the game.

User Guide

The player first opens the game and enters the Main Menu. They must tap/click to begin the game. The player selects 1 out of the 4 characters and continues on to dress him or her up in the given selection of outfits. There are 5 types of clothing items, namely Tops, Bots, Shoes, Hair and Gears and there are 4 items in each type. The player can go back and change the character they had selected, if they desire to. After selecting the desired outfit, the character that had been selected and dressed up is displayed with the other 3 characters with randomly generated outfits and a background. The background can be changed as desired from amongst 4 different backgrounds and then a snapshot of the characters is taken and displayed to the player.