# Rational for this Project

A group of people posing for a photo

Description automatically generatedIn this project we initially decided we wanted to make a game for the female gaming market. We took into account trends that we’d observed in the American and Japanese gaming market aimed at female players, as well as our own tastes in games.

A picture containing indoor, floor

Description automatically generatedThe two trends we zeroed in on were dress up games, a popular example being the mobile game *Love Nikki-Dress UP Queen*, and narrative heavy Choose-Your-Own-Adventure style games, such as the mobile game *Choices*. We also thought the idea of a mobile game would be preferable, as smartphones are rapidly becoming normal for most people to have, which in turn means the potential users do not need additional hardware purchases in order to play.

Figure - Choices. A popular choose your own adventure style game. Image source: https://rhapsodyofsound.wordpress.com/2016/12/12/choices-story-you-play/

Figure - Love Nikki Dress Up Queen. A popular dress up game. Image Source: https://www.pocketgamer.biz/asia/comment-and-opinion/66449/love-nikki-more-than-meets-the-eye/

Although less directly influential, we also looked at the Japanese romance games where there is a female lead with one or more potential male love interests. Anna Carlson had previously been to Japan as an exchange student and a business student and had considered the genre in light of the potential business opportunities in translating and importing the games. In the US, romances (a genre traditionally most popular among women) have been slower to make the move to video games in comparison to action or sci-fi, but in Japan romances are popular video-game genre. Since we’re interested in appealing to a female market, we considered it wise to examine their approach. A point we thought worth considering about this situation is that these games are often aimed at a young adult market. Within our group we were split as to whether it would be better to aim for an all-ages game, or for a young adult game. We decided to arrange things so we could go in either direction, or we could even potentially make separate games using much of the same code.

With all this decided we settled on a dress up game that takes place at a magical school. The working name we game it was *Magical School Dress Up*. Unfortunately, the mobile section was largely dropped, but as planning for it adjusted many of our choices it may be referred to throughout this report.

# Project Breakdown

We broke this down into three parts: the narrative section, the dress-up minigame, and the mobile section.

For the narrative section we needed

# Artwork and Programming Logic Behind Dressing Hero

The character model for the hero was drawn in Photoshop, clothing models were drawn in Photoshop in layers and then saved as individual files such as: “hair\_wavy\_purple.png”. All artwork was drawn by Anna Carlson.

Hypothetically there was the option to include two Heroes in the game. At the time of the writing of this however, it looks like the female protagonist will be cut from the presentation copy. The program was written, the art was designed, and the story was modified in such a way however that the two could share the same wardrobe.

Within the game the classes Hero and Clothing interact quite a bit. The Hero class contained an attribute Wardrobe, and Outfit. Outfit stored only the clothing pieces that the hero was wearing, while wardrobe contained all the pieces he or she had collected for use in later dress-up events.

Enums were used in the clothing section to store and retrieve clothing from an array without wasting time running through an array looking for a string or the programmer memorizing an ID number. There was one Enum which held items like SHIRT, PANTS, HAIR, etc., to represent each type of clothing used for the layering logic in dressing the character, and then separate Enums for each type of clothing. The size of the arrays were calculated by the length of the array. For example, all the shirts in the game are declared in a Clothing array function called initilizeShirts(), which is received by Clothing.Shirts. A simplified version of which is the following:

Clothing[] shirts = new Clothing[(int)Enum.GetNames(typeof(SHIRTSENUM)).Length];

shirts[(int)SHIRTSENUM.WEAVY\_BLUE] = new Clothing("Wavy Blue Shirt", Properties.Resources.shirt\_wavy\_blue);

return shirts;

Within the Hero class there was a method called dressHero(), which would update the hero’s bitmap image by means of using the Graphics class to modify a copy of the base body bitmap, and return a new bitmap after each item in the hero’s outfit was called by using the TypesOfClothing Enum, which make it easier for the programmer to verify they were loading in the proper order. The function dressHero() is called whenever the Hero image needs to be updated.

# Dress-Up Minigame

There is a class called minigame that at the time of this writing is responsible for calling the “Dress-Up” form, which the player needs to win to continue the story. The minigame is written in such a way that there could theoretically be other minigames the player would have to complete instead. The Hero model is also passed into this, so that changes to the Hero’s outfit or wardrobe as a result will pass through to other parts of the game.

# Functions

* Choice() [Choice.cs, line 11]: Allows us to make a choice in the story
* Clothing() [Clothing.cs, line 69]: Allows us to choose a type of clothing from the wardrobe for the character to wear.
* InportStoryfile() [GameData.cs, line 31]: Takes a text file and puts it in the narrative section of the game interface
* initilizeGlamorHobosAdventure() [GameData.cs, line 52]:
* initilizeStory() [GameData.cs, line 79]: Initializes the story with the correct files
* Hero() [Hero.cs, line 21]: Creates characters in story with all of their attributes
* starterOutfit() [Hero.cs, line 82]: gives the user a default outfit
* addToWardrobe() [Hero.cs, line 151]: Adds new clothes into the user’s usable wardrobe
* dressHero() [Hero.cs, line 172]: Puts clothes on hero
* updateDrawImage() [Hero.cs, line 216]: Draws hero with current outfit
* changeShirt() [Hero.cs, line 228]: Updates shirt image on hero
* changeClothing() [Hero.cs, line 237]: Updates clothing image on hero
* Item() [Item.cs, line 13]: Makes a new item
* Minigame() [Minigame.cs, line 19]: Initializes a new minigame instance
* start() [Minigame.cs, line 27] [Story.cs, line 209]: Begins minigame; returns true if won, false if lost; begins story
* Occurance() [Occurance.cs, line 10]: Initializes an occurance with a name, description, and image
* Main() [Program.cs, line 15]: Begins game
* Story() [Story.cs, line 17]: Initializes the story with story text, choices on or off, and images
* updateImageArraySizes() [Story.cs, line 30]: Makes arrays to hold different aspects of the game
* addMiddleCharacterImage() [Story.cs, line 52]: Makes character image visible
* addBackgroundImage() [Story.cs, line 67, 75]: Inserts background image
* addForegroundImage() [Story.cs, line 81, 90]: Inserts foreground image
* imageArrayVisibleLoop() [Story.cs, line 95]: Adjusts position of image on background
* addOccurance() [Story.cs, 126]: Creates occurrence in story
* next() [Story.cs, line 223, Form1.cs, line 81]: Progresses through story text, checks for minigames or occurrences, checks for image change
* last() [Story.cs, line 227]: Ends story
* findItem() [Story.cs, line 303]: Makes occurrence where item is found
* branchStory() [Story.cs, line 318]: Branches story
* addMinigame() [Story.cs, line 329, StartPage.cs, line 101]: Starts new minigame
* Form1() [Form1.cs, line 23, 30]: initializes Form
* Form1\_Load() [Form1.cs, line 41]: Loads images into the form
* checkForImageChange() [Form1.cs, line 113]: Positions or changes image along with the story
* occuranceSwitch() [Form1.cs, line 176]: Makes popup widow when occurances occur
* showMultipleChoiceRoutes() [Form1.cs, line 186]: Makes popup window for story branching
* selectNextStory() [Form1.cs, line 238]: Lets us select a new story when there isn’t actively one running
* StartPage() [StartPage.cs, line 22]: Initializes game components
* DressUpContest() [DressUpContest.cs, line 18]: Initializes dress up games
* fillClothingSectionBox() [DressUpContest.cs, line 42]: Shows clothing user has in wardrobe in listboxes
* changeIndividualClothingItems() [DressUpContest.cs, line 90]: changes an individual clothing item on the character

# Screenshots

