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CS 385 – Mobile Computing

Final Project Proposal

Documentation: I have received no help in completing this assignment.

**Project Idea**

My project idea is to create a USAFA marching game in which you would march a flight or squadron on the terrazzo and correct the marching in your squadron. As the main player of the game, you are the squadron/flight commander. As you advance in the game, you will be able to unlock new characters and new levels, such as Jack’s Valley. The audience of the game will be cadets who want to practice marching and permanent party who want to relive their cadet days or get a refresh on how to march. I want to do this project because I think it would be a hit amongst the cadet wing similar to games such as “Mitch’s Mayhem”.

**Initial Model Design**

The design for this game is to set the view of the player as a bird’s eye view of the terrazzo. By doing this, the main player can see where they are going and it will allow the game to be implemented in 2D. I will create a class called “cadet” which will be used for all the marchers in the squadron. Then, I will instantiate an array of cadets depending on the size of the squadron that is being marched. A class will also be created for the main player marching the squadron, which will have different attributes depending upon the character being used. The plan for data persistence (i.e. saving the game) is to use NSUserDefaults, which will allow me to store data to the iOS device so the game can be saved. The methods my model will use for the cadets include getOutOfStep(), fallBehind(), fixDress(), and fallOut(). For the squadron commander, there will be methods such as rightTurn(), leftTurn(), changeStep(), goForward(), and halt().

**Frameworks**

**Cocos2D** will be used as the game-development tool (with a physics engine) to implement and create the game.

**SpriteBuilder** will be used with Cocos2D to build and animate the sprites which will be used.

**NSUserDefaults** will be used to save the game data to the device so that progress can be saved.

**Risk Factors**

**Inexperienced Team Member** – Since I have no experience with programming games in an iOS environment, this will be by far the biggest risk. However, it will be mitigated by using online textbooks to teach myself about how to program games in iOS and use the frameworks referenced above.

**High Level of Technical Complexity** – This risk will be mitigated by starting the project early and consulting the instructor or online help if necessary.

**Project involves the use of technology that has not been used prior project** – this is a similar risk to the two aforementioned, and will be mitigated by starting early, using good resources, and hitting my project deadlines.

**Task Timeline**

**T26** – project design done (i.e. environments and sprites designed)

**T28** – sprites picked out and environments created

**T32** – basic marching functionality working in different environments

**T35** – gate check – implement saving the game

**T36** – game functionality working nearly 100%

**T38** – levelling up and different environments implemented

**T40** – project done