Project 1 (15%)

CS 481/681: Advanced Computer Game Design
Spring 2011

Objectives

1. Demonstrate an ability to apply knowledge of computing, mathematics, science, and engineering (1)

2. Demonstrate an ability to function effectively on multi-disciplinary teams (4)

3. Demonstrate an ability to analyze a problem, and identify, formulate and use the appropriate computing and engineering requirements for obtaining its solution (5)

4. Demonstrate an ability to communicate effectively with a range of audiences through your game (7)

5. Demonstrate an ability to use current techniques, skills, and tools necessary for computing and engineering practice (11)

6. Demonstrate an ability to apply design and development principles in the construction of software systems or computer systems of varying complexity (13)

There are three parts to the assignment. The parts overlap.

1 Concept: Game Design and Documentation (Due Feb 7, 1%)

Design and test a prototype of your game concept. If you are building a prototype, I strongly recommend using the OpenECSLENT game engine. You will find it at:
`http://lagoon.cse.unr.edu/~lagoon/index.php/ECSLENT`

- Demonstrate this prototype in class/lab

- Create a web page for your game (See the instructions at

  `http://www.cse.unr.edu/~sushil/recipes/webpageHowTo.html`).

  Your web page needs to have

  1. Game Title
  2. A one sentence description of the game
  3. A longer one paragraph description of the game
     (a) What is the game about, what does it teach?

(b) Is there a confounding factor?

(c) Is it in the style of another game? How does your game's gameplay compare to other similar games (make sure you have links to the webpages for these games).

4. A screenshot or a scanned paper prototype image.

2 Specification and Design: Game Prototype Implementation and User Testing (Due Feb 14, 4%)

Create a playable game prototype that you can have users test. Users cannot be in our class. You are primarily testing gameplay, UI, and learning. For each of these three game properties, have your users fill out the user testing form that tells you what they like and what they dislike. The user testing form is on our class web page.

3 Implemention: Final Version of Game (Due Feb 28, 10%)

Taking feedback into consideration, refine your game, ensure that all levels have been tested, and get it ready for release. Graduate student groups must have more than one level.

- Create a downloadable executable on your game webpage (5%)

- The game will be evaluted on gameplay and on how well users learn. For testing user learning (5%):

1. Create a document with a set of questions for a pre-test to give users **before** playing the game to see what they know about the subject of your game. For example, if you are teaching addition, give them a set of addition problems that they have to solve in 10 minutes.

2. Make a set of questions for a post-test to give users **after** they play the game. This will allow us to test if their knowledge changed after playing the game. You cannot ask the same questions in the pre-test and post-test.