UA LITTLE ROCK | Department of Computer Science

Final Project Requirements

CPSC 2377 | Intro to Game Programming

Dr. Ivan Rodriguez-Conde

Task Summary

This project will provide you with experience designing and implementing content and features that contribute to the playability and “fun” of a game. You will create your own “new” game from scratch throughout the semester.

A game is often defined as “a structured sequence of goal-directed interactions”. For your game you must design and implement a program fulfilling this definition that includes the following required elements:

- **a premise**, i.e., a theme over which multiple subgoals (levels or level-equivalents) could be stitched into a game-wide goal;
- at least two unique subgoals (levels or levels-equivalent) that are unique but themed such that they indicate an arc toward the game’s overall goal;
- a set of mechanics (game-specific interactions between the player and the game) that form the majority of gameplay leading up to the achievement of a subgoal, which includes physics and/or animations;
- a rich-media experience (graphics, background music/sounds, and sound-effects triggered by gameplay, e.g. paired with mechanics).
- some sort of AI where the game makes some sort of decision based upon user input and/or choices.

Game Design Phase:

The first phase of this project will involve design. You are tasked with providing a short, written design document for your game. You are limited to the following description lengths:

- premise: 250 words
- level-design: 250 words (125 each)
- mechanics: 250 words (total)
- media integration: 250 words (total)
- AI: 250 words (total)

Some Requirements

The following devices must be in your final project:

- Graphics Device (using SDL2, a Texture class is optional, but suggested)
- Input Device (using SDL2, multiple key-presses should be allowed)
- Media Device (both background and appropriate sound effects)
- Physics Device (using Box2D)
- Should save and/or load from XML
- Should use component model with, at minimum, the following components
    - sprite component
    - input component
    - physics component
    - AI component
    - sound effects component

Last Updated: 8/22/2021