

PG5200 Tools Programming Exam 2

Delivery info:

- The code should compile in Visual Studio Ultimate 2017.
- Documentation should be submitted in doc, docx or pdf format.
- This exam requires individual delivery. You may, however cooperate in groups of two on the coding and deliver fully or partly identical code. If so, write separate documentation, and refer to the other group member in your delivery.

Make a tile-based level editor

Implement a level editor for a simple computer game. You may choose the type of game yourself. The level editor should contain a drawing area where you draw your level and a toolbox where you select what to draw. It should be able to save and load levels.

The delivery shall fulfil the following requirements

1. Implements a tile-based level editor
2. Tiles should affect neighbouring tiles in a sensible way.
3. Contains documentation (format doc, docx eller pdf) explaining:
 - a. Choice of solutions where there are multiple options
 - b. Any challenges
 - c. Parts you are especially satisfied with
 - d. Plans you did not get time to finish.
4. Programmed in C#.
5. Uses WPF.
6. Supports serialization and deserialization of assets
7. Utilises graphical "assets". Find online or draw
8. A format description allowing easy implementation of importers
9. 30% unit test coverage.

Optional features:

To get top grades you will need to implement some of this. Failed attempts at these will not lower the grade as long as the basic functionality is there.

1. Real-time cooperation. Two or more designers should be able to work on the same level simultaneously, as in Google Docs. Can be implemented using network or a database.
2. Multithreading. Loading and saving should be asynchronous, other potentially slow tasks should run in multiple threads
3. Unity importer. Files exported from the editor should be possible to load in Unity as levels.