
PROGRAMMING ASSIGNMENT I — WINTER 2022

 Due date: May 1st, before midnight 

Revision History

| Revision | Date | Author(s) | Description |
|----------|--------------|-----------|--|
| 1.0 | Feb 09, 2022 | S.R. | Initial handout. |
| 1.1 | Feb 16, 2022 | S.R. | Added the main character section. |
| 2.0 | Feb 19, 2022 | S.R. | Modified and added new requirements in all sections. |

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1 Learning Objectives

3D game design, HUD and in-game UI, working with multiple scenes, physics, Unity scripting with C#, collision detection, using prefabs & 3D arts, sound and visual effects as well as 3D animation, humanoid character and animation rigging.






2 Notes and Constraints















Note the following:

This is a thing to consider.

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-  This assignment must be done individually.
-  Do not plagiarize.
-  Do not do this.
-  Do not do this.
-  Do not do that.

3 Required Software and Tools

-  **Operating system:**  Windows 10,  Linux, **or**  MacOS
-  **IDE & Game Engine:**  Unity **2020.3 (LTS)** & Visual Studio **2019** (Community Edition)
-  Web Browser: Google Chrome.
-  Markdown for writing documentation.
-  Distributed version control system.
-  Bitbucket: a web-based version control repository hosting service.
-  Trello: a Web-based project management system.
-  A storage medium (a USB flash memory or any online free storage service such as GDrive or OneDrive) for storing and backing up your files.

4 Problem Statement

In this assignment, you are required to design and implement...

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5 Requirements

You must be heedful of the requirements stated in the following sections.

5.1 User Interfaces & Game Menu

Your HUD, main menu and in-game panels (or other UI controls) must be implemented using the [Unity UI toolkit](#).

5.1.1 HUD

You must implement an in-game HUD that fulfills the following requirements:

- ☐ Requirement 1.
- ☐ Requirement 2.
- ☐ Requirement 3.
- ☐ Requirement 4.
- ☐ etc...

Additional Resources:

- Resource 1.
- Resource 2.
- Resource 3.
- Resource 4.

5.1.2 Main Menu & Player Feedback

- * Implement this...
- * Implement this...
- * And implement that...

5.2 Game Deployment

You are required to publish your game implementation to...

5.3 Game Implementation Requirements

Your game implementation must include the usage of:

- a) 3D scenes.
- b) This requirement.
- c) And that requirement.
- d) Scripting:
 - | Main character control, animation and movement
 - | Collision detection
- e) Animations: mainly for the main character.
- f) Different visual effects (VFX), etc...

6 Evaluation Criteria

Your assignment will be evaluated based on the following criteria:

| Criteria | Mark |
|--|-------------|
| Game world design. | 5% |
| Good programming and logging practices. | 2% |
| Relevance and accuracy of the source code documentation as instructed. | 3% |
| Correctness and functionality of the implementation. | 60% |
| Compliance of the implementation with the stated requirements. | 15% |
| Programming style, etc... | 5% |
| Overall comprehension of the submitted source code. | 10% |
| Total | 100% |

7 What to Submit

You must submit: 1) a PDF containing a list of references as instructed above; and 2) your Unity project.

- ☐ Remove the *Library, Temp and Builds folders* from your Unity project.
- ☐ Create a folder and place in it your references document and your Unity project.
- ☐ Compress the folder you just created and upload it to LÉA.