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## PROGRAMMING ASSIGNMENT I — Winter 2022

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 Due date: May 1st, before midnight 

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### 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.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem.

Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante

- 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...

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Additional details and requirements are provided in the following sections.

## 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%
<b>Total</b>	<b>100%</b>

## 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.