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## Advanced Computer Lab Winter 2023

### Mini-Project 2: Unity is Strange

*Due: 11:59 pm November 24th 2023*

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## 1 Project Description

Video games as a medium are entirely built around interactivity. Unlike other types of media, the participant — or in this case, the player — actively engages with it, rather than passively consuming it. And at the core of that interactivity, lies the concept of choice. In video games, the player is not only a spectator, but also a storyteller, as they are free to choose the next course of action, as opposed to simply watching a linear storyline.

While most video games allow the player to choose how to approach a scenario using gameplay mechanics, some video games also allow the player to alter the course of the narrative by making choices at pivotal moments. Those games are usually called choice-driven narrative games or choose-your-own-adventure games, among other monikers. You can check the flowcharts created for some of those games by following the link below: <https://imgur.com/a/NDEFa6W>.

In mini-project 2, your task is to implement one such game, however, at a smaller scale. You are required to have at least **two decision points** in your game, and based on the decision(s) taken, different consequences might occur. Below is an example of a flowchart for a game similar to what you should do: [Example Flowchart](#). In this demo game, the scene starts where a village is under attack and the player's first decision is to choose which weapon to attack the monster with. Based on the choice of weapon, the player has another decision to make where they should choose how to approach the monster using the previously chosen weapon. Here are other examples from the previous years: [Example 1](#), [Example 2](#).

Once you have an idea of what you want to create, you and your team members should all work out how it fits the requirements below and prepare a flowchart representing the sequence of choices in your application. You have to draw your flowchart using google drawings: <https://docs.google.com/drawings>. You **should not** start implementation until your idea is approved. Approvals for the team ideas will be done in the pitch meetings.

All team members will then sit down with your TAs for a pitch meeting where they will decide on which parts should stay, which should be removed, and which should be modified if any. The pitch meetings will run on **Tuesday 14/11, Wednesday 15/11, and Thursday 16/11. Reservations will be available starting Sunday 12/11 @08:00PM.** The reservation link will be posted on the **CMS**. All team members should attend the pitch meetings.

After agreeing on the final details with the TA you should start working with your team members to implement all the deliverables that were agreed upon in the meeting. At the end, the TA will evaluate your work based on two things; whether or not you fulfilled all the deliverables from the pitch meeting. As well as, the overall quality of your final product.

**Please note the following:**

1. You are free to create a completely original narrative, or adapt an existing one. In case of the latter, please include the name of the intellectual property you are using.
2. You must include all the required aspects that will be mentioned in the following sections in your proposal.
3. Your submission must adhere to the proposal without omitting any of the features mentioned.
4. You should avoid having any religious, sexual, or political aspects in your project.
5. You should try as much as you can to create something awesome.
6. *No movement control is needed to control the player movements. Just use the buttons as described below to choose between the decision points.*

## 2 Requirements

In this section, the symbol  $N$  denotes the number of team members in the team.

### 2.1 UI Screens

- **Main Menu**

- **Start:** A button that starts the game.
- **Credits:** A button that switches to a view which displays any and all due credits, including the information of anyone who worked on this project.
- **Quit:** A button which exits the application.

- **Gameplay**

- **Main Menu:** A button in the top left corner which switches back to the main menu screen.
- **Choices:** buttons that allow the player to choose how the story goes forward. These only appear when there's a choice to be made, then disappear after a choice has been made.

## 2.2 3D Models

You are required to have at least  **$N$  different humanoid models and  $2N$  different non humanoid models** in your application. You are allowed to import 3D models from external sources as long as you respect the ethical rules of crediting. You will find some helpful resources in Section 3.

## 2.3 Animations

You are required to have at least  **$3N$  different animation clips** representing different actions. You are allowed to either create your own animation clips, or import pre-made ones as long as you respect the ethical rules of crediting.

## 2.4 Lights

- You are required to incorporate lights inside your project. This does not include the use of a light source just to light up a scene.
- Lights should be used in an innovative way to help your project to stand out.
- You have to make sure that the effect of the different light sources is clear in your project.

## 2.5 Textures and Materials

You are required to assign textures/materials to all objects inside your application.

## 2.6 Audio

### 2.6.1 Music

- You are required to have at least one audio soundtrack for the menus.
- You are required to have at least one audio soundtrack for the gameplay.
- You are required to have a different audio soundtrack for whenever the player gets to make a decision.

### 2.6.2 Sound Effects

You are required to have  **$2N$  sound effects**, associated with the implemented animations. This means that at least two-thirds of the animations will have sound effects associated with them.

## 2.7 Cameras

You are required to have at least  **$N$  camera angles** in your application. At least one camera angle should be dynamic.

## 3 Resources

The following links might be helpful to you during your implementation:

### 3.1 3D Models

- <https://assetstore.unity.com/3d?free=true>
- <https://www.free3d.com>
- <https://www.mixamo.com>
- <https://www.blendswap.com>
- <https://www.sketchfab.com/>

### 3.2 Textures

- <https://assetstore.unity.com/2d/textures-materials?free=true>
- <https://www.textures.com>
- <https://www.polyhaven.com/>
- <https://www.cgbookcase.com/>
- <https://www.ambientcg.com/>
- <https://www.quixel.com/megascans/library>

### 3.3 Audio

- <https://assetstore.unity.com/audio?free=true>
- <https://www.freesound.org>
- <https://www.filmmusic.io>
- <https://www.bensound.com>
- <https://www.purple-planet.com>
- <https://www.bfxr.net>

## 4 Guidelines

- This mini-project should be done **in teams of 4-5**. You can share ideas, consult the manual, and search online. However, all work done in this mini-project must be done by the team members and the team members only. **All team members should work on this mini-project equally** and no work should be done by anyone outside the team. This also means that copying code from online resources or ChatGPT is not allowed. Team evaluations might be conducted at the end in order to verify that.
- All external assets used (including those from Unity's asset store) **must be credited in the credits section of the main menu**.
- Please use the following link to register your team by ***Friday 10th of November at 11:59PM*** <https://forms.gle/SUhA4bQsUjVss3228>.
- Please use the following link to submit your proposed idea and diagram before the meeting <https://forms.gle/VaEZEkPXqVkmwavy5>. **No meeting will be conducted without the submitted form including the diagram.**
- Use **Unity** and **C#** to create this project. Once you are done, build the project for **Standalone Windows** and compress it into 2 .zip files (not .rar) as follows:
  1. A .zip file including the .exe file only. The zip file should be named in the following format “**Team\_TeamNumber\_EXE**”, for example: “**Team\_21\_EXE.zip**”. This .zip file is to be uploaded to the **form directly**.
  2. A .zip file including **all** files generated on build e.g. “**\_Data**” folder, “**Unity-Player.dll**” file, “**\_exe**” file, **etc.** The zip file should be named in the following format “**Team\_TeamNumber**”, for example: “**Team\_21.zip**”. This .zip file is to be uploaded to your **personal Google Drive** and set as accessible by “**Anyone with Link**”. A **link** to the .zip is to be submitted to the form.
- Use the following link to submit your Mini-Project 2 files: <https://forms.gle/Dt5AGSmhpPdi15kTA>