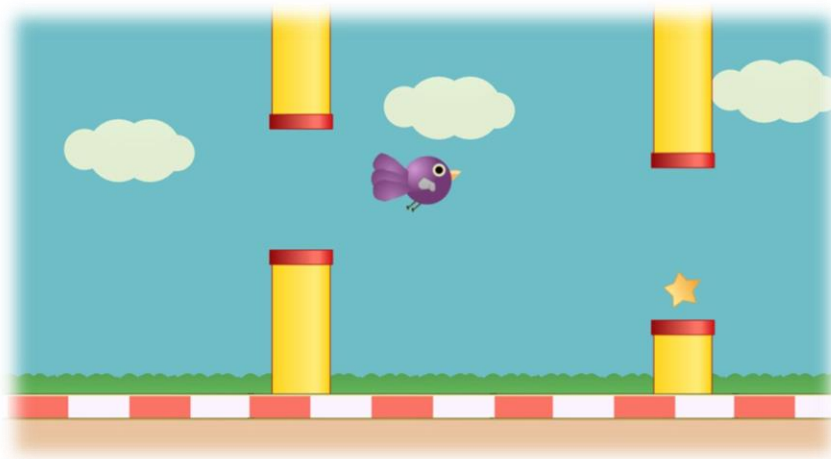




CS 458: Game Application Development
Unity Lab Assignment 1 (Phase 1)

The Flappy Bird



1. Goal

The goal of this assignment is to be familiar with the Unity game development platform and to create a simple funny 2D game “The Flappy Bird”. Moreover, the assignment aims at developing your skills by modifying the flappy bird game based on some given requirements.

2. Requirements

1. Read the Unity Guide ([Uploaded in the Blackboard](#)).
2. Install Unity.
3. Watch the Unity video tutorial to learn more about Unity platform: https://youtu.be/XtQMytORBmM?si=3f-dhsvp_zhRlo9i (avoid music)
4. Follow the steps in the provided video tutorial ([the above link](#)) to create your first 2D game “The Flappy Bird”
5. You are asked to edit the Flappy bird game by specifically do the followings:

- Be creative while selecting the scene/background and the character (e.g., you can choose a blue sky with white clouds and a flying butterfly, or you may choose a blue ocean with a flappy fish!!) 0.5 mark
- Choose your own obstacles (e.g., if you choose butterfly character, you can select the obstacles to be flowers or if you have selected fish as a character then you can select the obstacles to be any under ocean tree) 0.5 mark
- Add a **start menu** that appears at the beginning of the game. The start menu should present the game name with a picture related to the selected character. In the start menu you should add two buttons (**Select level and Play**).
 - 1) **Select Level:** This button allows the player to select a game level. The game level determines the difficulty level of the game. The difficulty level manages the speed of the bird/character and the space between the pipes/obstacles. Your game should have two different levels:
 - **Level 1 (Easy):** In the easy level the flappy bird/character moves with a slow speed and the space between obstacles/pipes should be big enough for easier control during the play. 2 marks
 - **Level 2 (Hard):** In the hard level the flappy bird/character moves with a fast speed and the space between obstacles/pipes should be small which makes the play more challenging to avoid hitting the pipes. 2 marks
 - 2) **Play:** the play button starts the game after selecting the level. 1 mark
- Add the following sounds:
 - **Background Sound:** this sound should be played during the game all time to make the game joyful. 1 mark
 - **Collision sound:** this sound should be played when the character (e.g., bird) hit the obstacles (e.g., pipe). 1 mark
 - **Game over sound:** this sound should be played when the player loses and the game restart (The player loses when he/she hits an obstacle. Hence, the game over sound should follow the collision sound.) 1 mark
 - **Winning sound:** this sound should be played when the player wins (set the winning condition to be either a restricted time e.g., after 1 minute if the players not hitting any obstacles they win, or restrict the winning to be a specific number of obstacles e.g., if the players pass 20 pipes they will win) 1 mark
- Save your game and present a demo during the lab session.

3. Grading and Submission

- This Assignment should be solved individually.
- The Assignment is out of **10 marks**.
- The game should be completed by the end of the sixth week
- You will present a **demo** of your **2D game** to your teacher.

Good Luck ...
Happy Gaming ...