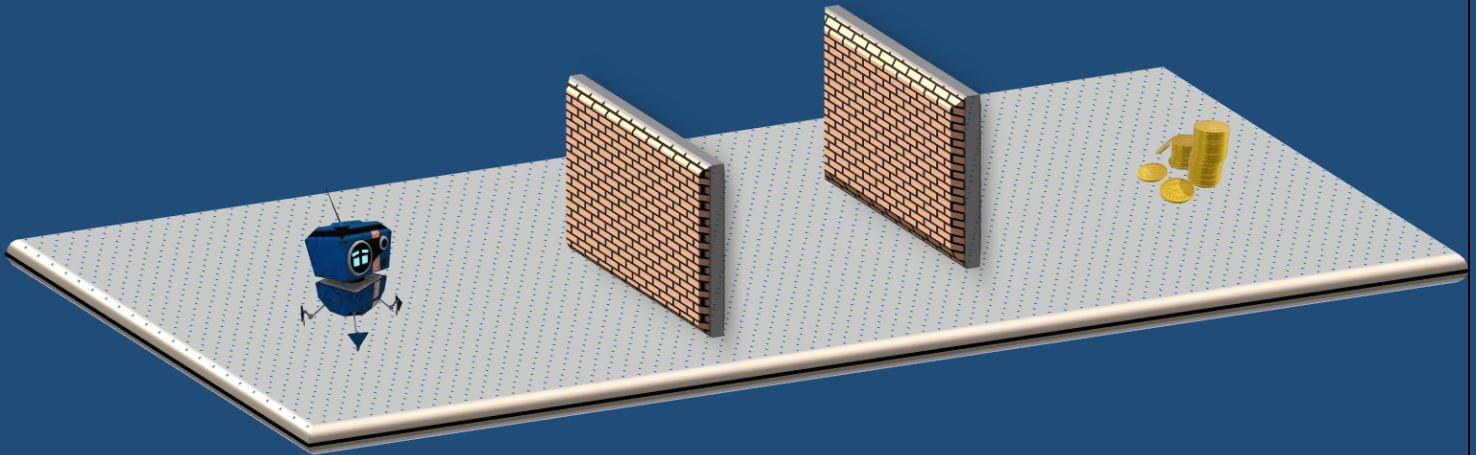# SWE 585

HW#3 – A Simple 3D Barrier Game

(You are not expected to use these visuals for the game. You can design your own scene, player character, barriers etc.)

In this assignment you will create a simple 3D barrier game with the following mechanics:

- Player: Can move on single axis only (forward and backward). No jumps. Movement controlled by the user. Dies upon touching a barrier.
- Barrier 1 & 2: Moves in perpendicular direction to the player. Controlled by game. Should open and close at random times and keep its state for random durations.
- Treasure: Taken by the player IF (in vicinity) AND (a certain input is active). Should visually disappear when taken by the user.
- If player can reach start position after getting the treasure s/he wins the game.
- In the cases of both win and lose, game should ask user for another round.

Things to consider:

- You can use any shape appropriate for barrier (a sliding door, parking barrier, a rock etc.) However, you should use **NOT** use animation to move the barriers.
- Barriers should not have binary visual states such as opened/closed but rather exhibit continuous movement handled by the physics engine.
- You should use coroutines for open/close movements of the barriers.
- You can visually design the game scene and game objects by yourself. However, you are also allowed to use the asset store or any other repo for game objects in your game (EXCEPT the scripts!).

GRADING CRITERIA:

Technical approach in scripts: 50%

Correctness of the game mechanics: 35%

Smoothness of the game experience: 10%

Visual/audio design and aesthetics: 5%

PENALTIES: - 60% if physics engine or coroutine is not used for barrier movement.

BONUS points:

- Be able to change game difficulty from a menu displayed at the start of the game. (5%)
- Use two different cameras and let the user change the active camera as s/he plays the game. (5%)
- Add sound to this game. (5%)