
CS7.30 — Computer Graphics

Instructor: Avinash Sharma
Release Date: January 18

Due Date: January 27 23:55
Assignment: 1

In this Assignment we will build a 2D Game. You can re-use the boilerplate code provided before or make your own boilerplate code.

Note - Every sprite(obstacles, players, enemies, coins, etc.) has to be made by you using simply triangles.

Note - Please don't request for deadline extensions at the last hour.

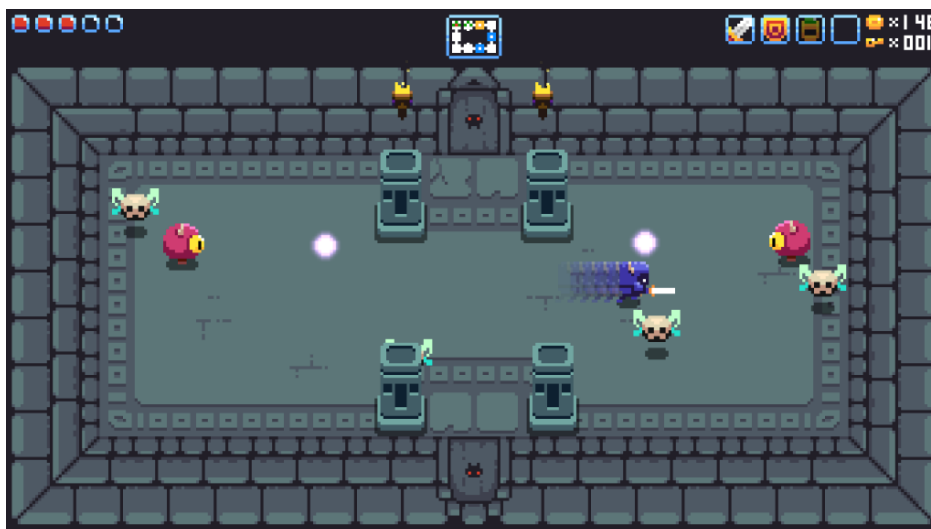


Figure 1: This is a representative image, don't copy it!

1 2D World

- The world you play in consists of 3 rooms. There should be a door at the edge of each room which leads to the next room. The final room can contain a special door which upon reaching finishes the game.
- This is a top-down game with fixed frame dungeon rooms. So for all the 3 rooms your camera should show the whole room and not move. It should move only during the room transitions.

- The rooms must contain some walls (randomly generated) apart from the 4 edge walls. The players, enemies and coins should be able to collide with the walls, but make sure none of the mentioned entities end up spawning within a wall.
- The rooms have to be randomized upon every run of the game i.e. the structures of the rooms and the enemies/obstacles in it must be randomly spawned depending upon some initial random seed.
- As we proceed through the rooms, the difficulty of the game should exceed (more coins, enemies, walls). It is upto you to interpret and make it difficult in some way.

2 Player and Movement

- There would be a single player.
- Use your creativity to create an aesthetically pleasing player.
- The player can move up, down, left and right.

3 Enemies and Coins

- Every room should have some collectibles coins. You can animate these coins to make them look better and more appealing.
- Collecting coins should increase the score of the player.
- The room should also have some moving enemies that the player has to dodge. If the player comes in contact with these enemies the game should end.

4 Lights

- There should be a button which can toggle the lights.
- When the lights are on, only some area surrounding the player should be visible while the rest of the world should go dark.
- The player should earn more points for the time he plays in the dark.

5 Heads Up Display

- Your game should have a heads up display which indicates the current score, time taken since start and any other details related to your game.

- When the game gets over or completed, the status (GAME OVER/FINISHED) should be displayed for a couple of seconds before the game exits.

6 Submission Instructions

Please zip your main directory after removing the build directory and rename it as "Roll-Number_A1.zip" and upload the zip. Remember to submit your own code.