

# Project Plan - Final Project

## Option 3 - Design your own game

This is very open-ended so you will need to get approval from the instructor before starting.

At a minimum, you will be required to do the following (or equivalent with instructor approval):

1. Main Menu
  - a. Include the game title and a button to start the game
2. Game Over Screen
  - a. Includes the results of the game (won/lost and score, if applicable), and a Replay button
3. At least 3 levels - or equivalent
  - a. These will be 3 separate scenes (how to load new scenes will be covered in class)
  - b. Note: if the game has a lot of complexity, then a single level is fine.
4. At least 4 types of entities that you can interact with - for example, enemies, obstacles, collectibles
  - a. 2 entities can be what we used in Project 2 (goal, enemies, collectibles/coins)
  - b. The remaining 2 must be new
5. At least 2 objects in the game must be animated (with at least 2 states)
6. At least 5 custom sprites (can pull from kenney.nl website).
7. Create at least one new script for your game... Some ideas:
  - a. Make an enemy cause more damage when the player touches them.
  - b. Have an enemy die (get destroyed) when the player touches them.
  - c. Make a script for a collectible that gives the player health.
  - d. Change the movement pattern of the enemy (perhaps patrol, wait, patrol, or patrol vertically instead of horizontally)
  - e. Any other new behaviors you can think of.
8. Background music
  - a. A track that loops during gameplay
9. Add at least 4 new sound effects to the game. Where and when to use them? That's up to you.

## 1. Game Summary

Find the REAL way to reach the end and eat the cake, collect candies to get points, and protect yourself from other enemies and obstacles they set on your way. There would be a few fake paths to confuse the player, at the fake paths' end, there would be a bonus like 10 more points

or a boss enemy which would be triggered to start moving (if it's possible, the boss enemy would target the player) when the player enters a certain area.

## 2. List all the features of your final project.

**Add your features to the list below (and add more items to the list as needed)**

1. Basic assets:
  - a. A player: needs animations in different movements;
  - b. Enemy: animations needed
    - i. Regular: moving and could be defeated
    - ii. Boss: targets on the player
  - c. Barriers: cause damage, would reduce the health points.
  - d. Platform: both horizontally and vertically, moving or still;
  - e. Misleading entrances
    - i. One for the first level;
    - ii. Two for the second;
    - iii. Three for the third.
  - f. Goal: doesn't have any extra points;
  - g. Sign: put on the crossroad.
2. Mechanics:
  - a. Moving: both horizontal and vertical;
  - b. Beating enemies: I'm thinking of jumping on the enemy's head to trigger the damage, or it could be adding weapon elements to the player, for the boss, it may cost one more bullet compared to the ordinary enemy;
  - c. Coin collecting: different coins have different values, for instance, bronze equals one, silver equals two, and gold equals three;
  - d. Bonus: when the player enters a wrong path and gets to the end of that road, there may be a treasure box, which could be ten more points than coins;
  - e. Life system:
    - i. Due to my reference game Celeste, I initially wanted to do a non-death game, which allows you to automatically rebirth after you die, and you'll be set back to the latest memory point, but it seems too hard for me so far,
    - ii. so I probably would still do the regular three or four or five life counting
    - iii. but could add a health statement, and being hit by any enemy or stepping on any harmful barrier would not take life but do harm on the health statement, losing certain health points would cause life lost,
    - iv. would be a type of "coin" that is set to regain health points.
3. UI setting:
  - a. Main menu

- i. Guiding to a certain level, players are not allowed to pass any level if they haven't done the previous level;
  - ii. A button to show the information of game developers;
  - iii. A setting button to adjust the volume of sfx and bg music (not necessary this time, if it's easy and time allows).
- b. Corner text box:
  - i. A text box to show the player's current scores and the target score to pass the current level;
  - ii. A text box to show the health statement points;
  - iii. A text box to show how many lives the player is keeping;
  - iv. A text box to show the number of weapons the player has
- c. Game end panel
  - i. Game over if the health statement and life counting equal 0, a button to respawn (if could do with non-death version, then ignore this);
  - ii. Successfully passing the level panel, a button to back to the main menu, and a button to go to the next level.

### 3. For each of your features, break them down into tasks that you will need to do to complete them.

#### **Add your feature + task breakdowns below**

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Basically same as what I have for features with details

## 4. Create your project milestones

**Fill out the following milestones that you will use for your project**

Milestone 1 - Due November 18

- Finish the basic assets and set the 1st level (flexible with the 2nd level) design up
- Finish mechanics a(moving) and c(collecting)

## Milestone 2 - Due November 29

- Finish all the levels' assets and set-up;
- Finish UI c (game end panel),
- Be flexible on UI a(main menu) and b(corner texts), finish at least one
- Finish mechanics c(collecting), and at least one of the left.

## Milestone 3 - Due December 12 (Final Project Due - must be uploaded to itch before)

- Finish the remaining UI (a or b);
- Finish the remaining mechanics (two or one);
- Uploaded to itch.