

New Beginnings – Summer 2018

C++ Programming - Course Project – Dungeon Game

For the remainder of the course, we'll be building a fun dungeon game. This will use all/most of the concepts we are learning this summer

Phase 0 – Critical Decision

This the most important phase of writing great game. You should give extensive thought and consideration during this phase. To be successful, answer the following question well:

What is the name of your game?

If you do this right, everything else will fall in to place. ☺

Phase 1 – Getting started – Directory Structure and User Input

Once you have a name, create a directory by that name. You will keep all of your source files, compiled files and tests in this directory.

Create two directories in that new directory:

1. "src" – This is where you will keep all of your source code.
2. "bin" – This is where you will keep the compiled output. "bin" stands for binary and is a standard directory name for executable programs.

In the src directory, create a cpp file with the same name as your game. This will contain your "main" routine.

Now add the main routine with the following:

1. A 10x10 2-dimensional array of integers
 - a. Initialize the array to all 0's
2. Two ints that represent the position of the player in the grid.
 - a. Start with the player at 0, 0
 - b. Set the value of the array at 0, 0 to 1
3. A while loop that takes player input
 - a. Compare the player input
 - i. N, E, S, W for moving the player
 1. Call the move_player function(see #4 below)
 2. Call the print_map function(see #5 below)
 - ii. X to exit the game

4. Create a new function(move_player) that takes the array, the player position(x and y) and the input.
 - a. The function will move the player appropriately – changing the values of the array.
 - b. You decide what to do if the player is at the edge of the map
 - i. Wrap around – infinite map
 - ii. Stay where they are – hit a wall
 - iii. Exit the game – fell off a cliff
5. Create a new function(print_map) that prints out the array to stdout(cout).

To compile your code, from the top directory(the name of your program), run(replacing <game name> with the actual name you gave your game):

```
g++ -o bin/<game name> src/*.cpp
```

To run the newly compiled program

```
./bin/<game name>
```

Compile, debug, run, debug, repeat!

Phase 2 – Build the Dungeon

TBD

Phase 3 – Build the Player

TBD

Phase 4 – Build the Items

TBD