

Each exercise will build up on the one prior to it, so don't start new projects each time.

### Exercise 1: Draw a Map

Draw a square-shaped map. Its width is 20 characters, and its height is 10. Use two for-loops, with one for-loop nested inside the other for-loop. It will look like this:

```
*****
*****
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```

### Exercise 2: Add a character

Create two integers to store **playerX** and **playerY**. Assign these some value (x between 0 and 20, y between 0 and 10).

Within your map-drawing for-loop, whenever it gets to the position that the player is at, draw an @ sign instead of an asterisk.

### Exercise 3: Move the character

Create a **done** boolean to keep track of when the user wants to quit. Create an external while loop that will draw the map and get the user input each time.

After the map is drawn, ask the user to move or quit.

If the user enters “N”, “S”, “E”, or “W”, adjust their x or y coordinate in the appropriate direction.

If the user enters “quit”, set **done** so that it will exit the while loop and end the program.

### Turn in

Once finished, upload your work in Desire2Learn, under **In-class Exercise 3**. I only need the **.cpp** source files. If it only allows you to upload one file, zip up your work and then submit the .zip file.