

**Spike:** Spike 5

**Title:** Gridworld

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**Goals / deliverables:**

Create a simple GridWorld game. It should use a simple game loop, separation update and game data.

Besides this report, what else was created?

- A small plan document to help me visualize what I had to do.
- A C++ code for the GridWorld.

**Technologies, Tools, and Resources used:**

List of information needed by someone trying to reproduce this work

- Visual Studio 2022
- Forums to relearn how to make grids (e.g. <https://cplusplus.com/forum/beginner/66127/>)
- Copilot extension to assist in code errors that I didn't know how to fix.

**Tasks undertaken:**

List key tasks likely to help another developer

This section should resemble a tutorial – the goal is to allow another coder to reproduce your work following these steps.

Eg: (Good)

- Download and install Visual Studio
- Open Visual Studio
- Create C++ file
- Include iostream and the main function
- Create 5x5 grid
- Create and position #, S, D and G
- Create int variables 'row' & 'col' to initialize the player position
- Create an infinite loop that goes on until the player win or lose
- Create a loop that prints the grid every time the player moves
- Create an output that tells the player the direction they can move to
- Allow the player to choose a direction and move to it using a switch statement
- Create an 'if' & 'else if' statements to create the win and lose conditions
- Run program and confirm everything is correct.
- Add comments.
- Submit to GitHub.

**What we found out:**

I relearned how to create a grid in C++ and how to change the character in the grid from number to letters, also relearned how to make and use a loop on C++. I am aware that the way I did things can still improve, so I'll work on that.

**Open issues/risks** [Optional – **remove** heading/section if not used!]:

- My VS community started failing and will not open.

**Recommendations** [Optional – **remove** heading/section if not used!]:

- To correct the issue, I had to uninstall and reinstall VS community.

**Images:**

```
Maze:
# # # # #
# # D G #
#       #
# D S D #
# # # # #
Directions allowed: N W E
Enter direction: N
Maze:
# # # # #
# # D G #
#   S   #
# D   D #
# # # # #
Directions allowed: N W S E
Enter direction: E
Maze:
# # # # #
# # D G #
#       S #
# D   D #
# # # # #
Directions allowed: N W S
Enter direction: N
Damn! You win this time. Adios!
```



```
Maze:
# # # # #
# # D G #
#       #
# D   D #
# # # # #
Directions allowed: N W E
Enter direction: E
Congrats! You died! Better luck next time
```