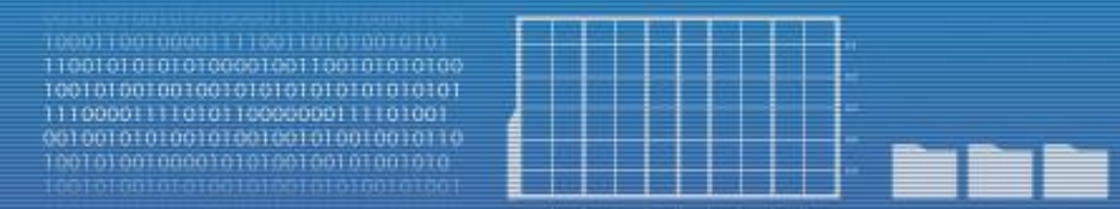
DEPARTMENT OF
INFORMATION SYSTEMS
AND COMPUTER SCIENCE

Text-Based Game: Exercises and Homework

Simple Start

Lecture Time!

- Exercises
- Homework



DISCS

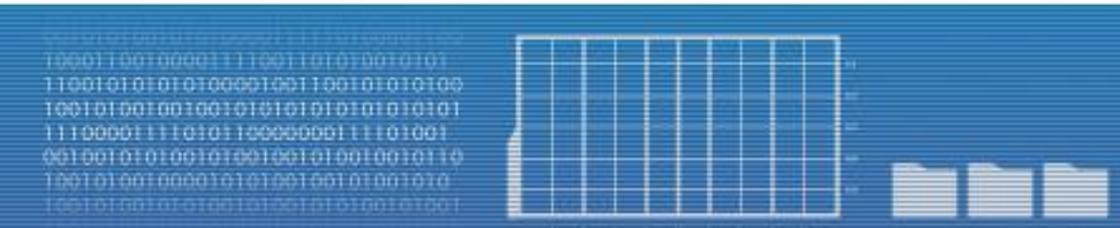
Exercise #1

- Create a C++ program that accepts user input and echoes it back
  - User input:

```
Hello there!
```

- Program output:

```
Hello there!
```



Exercise #2

- Edit the program so that it eliminates all leading and trailing whitespace characters (note: using underscores here to represent whitespace)
- User input:

```
_____So_many_spaces_before_and_after_____
```

- Program output:

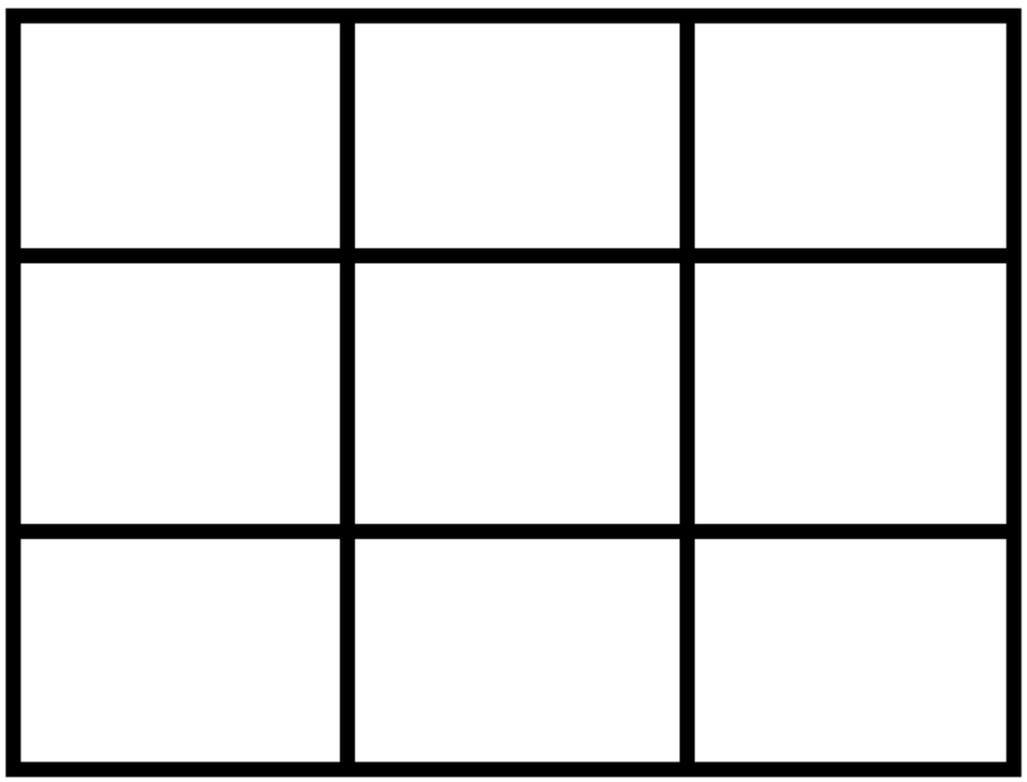
```
So_many_spaces_before_and_after
```

Homework

- Homework is to be done by group, not individually
- Form groups of 2-3 please
  - Flying solo is not allowed
- Your group will most likely be your group for the course project

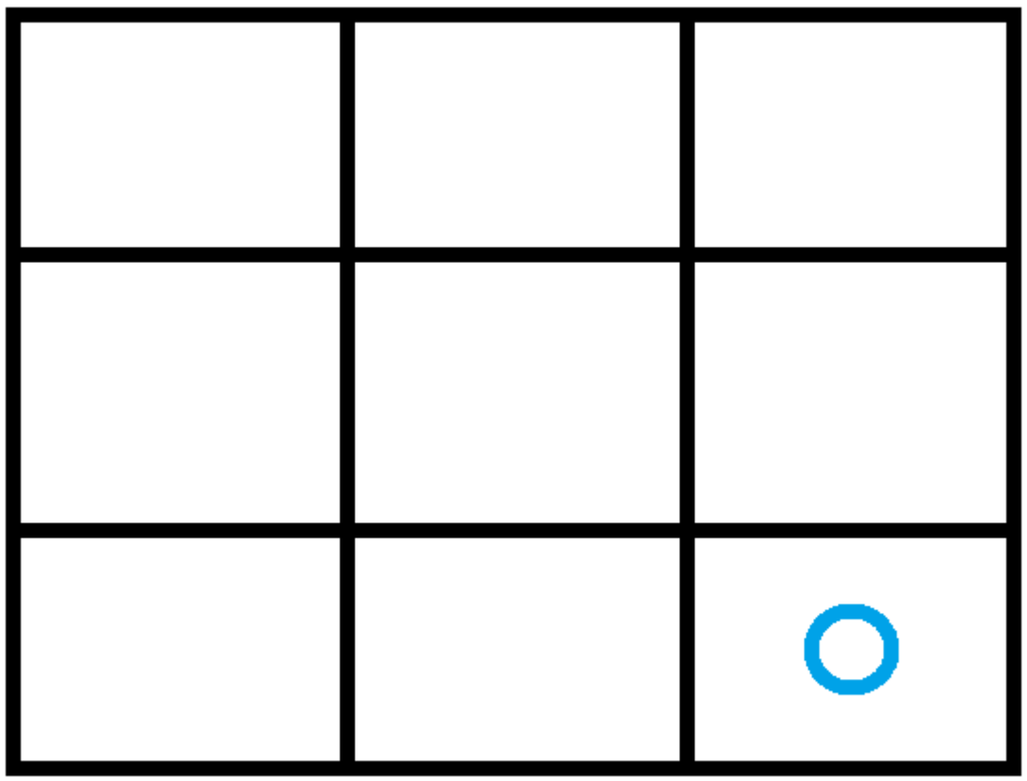
Homework

- Imagine a world represented by a 3x3 grid:



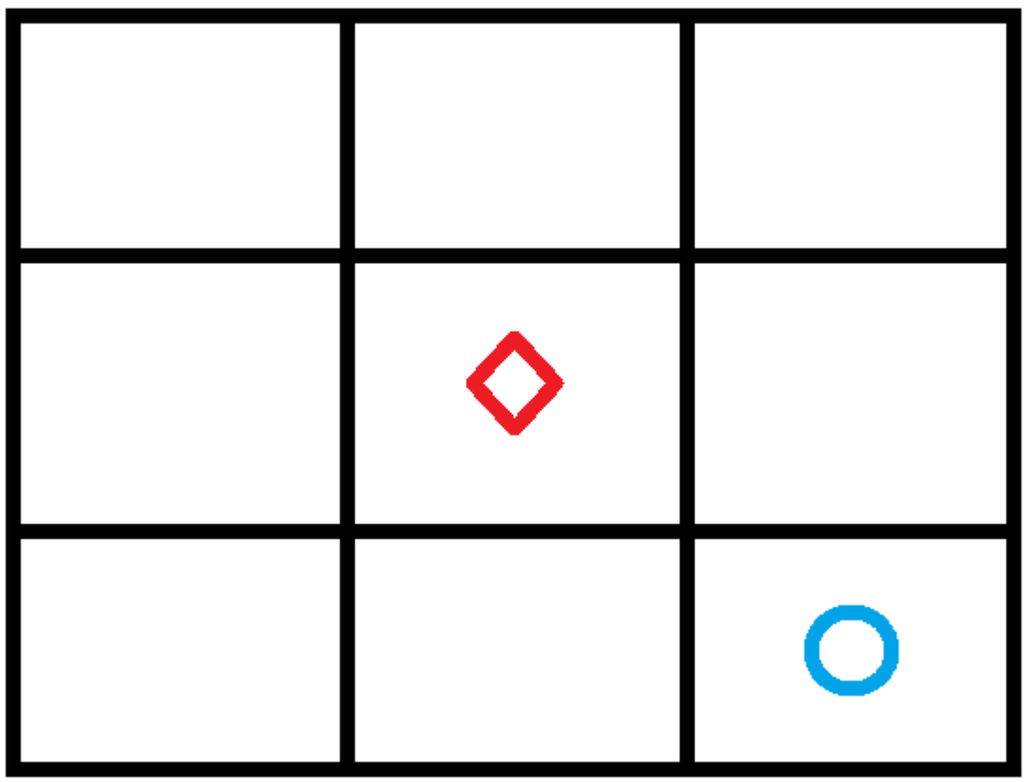
Homework

- You start here...



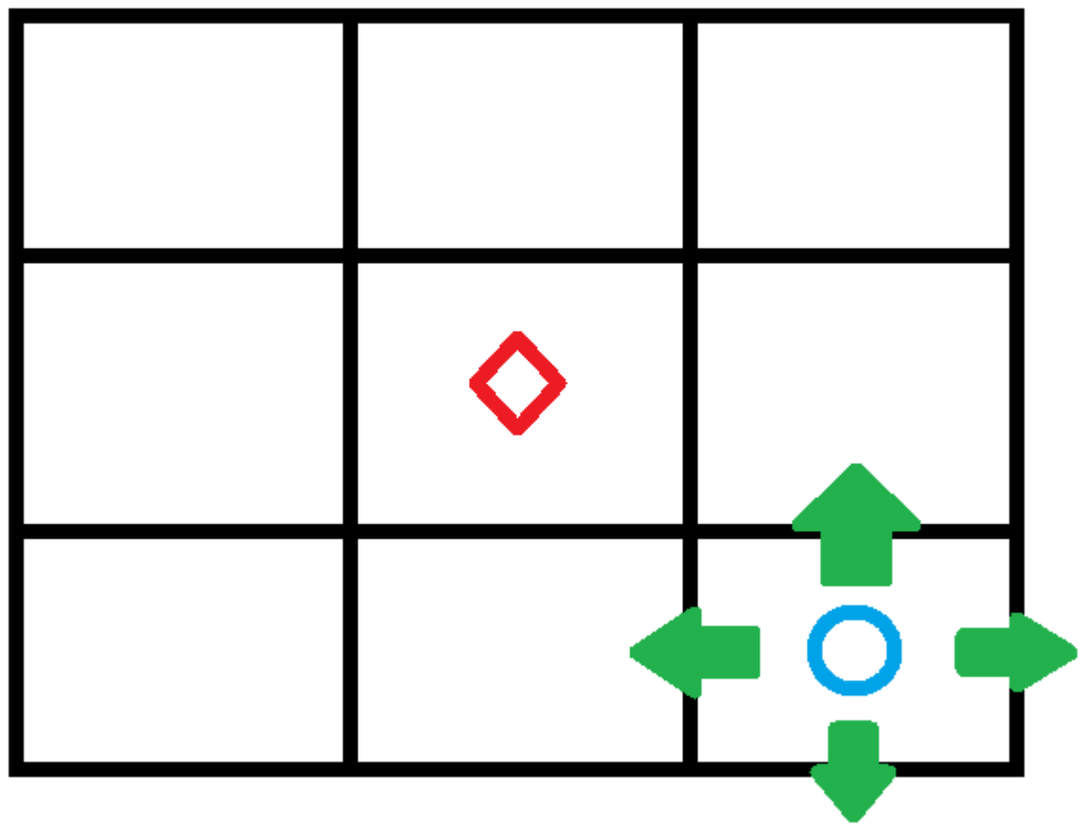
Homework

- ... and must eliminate a target found here:



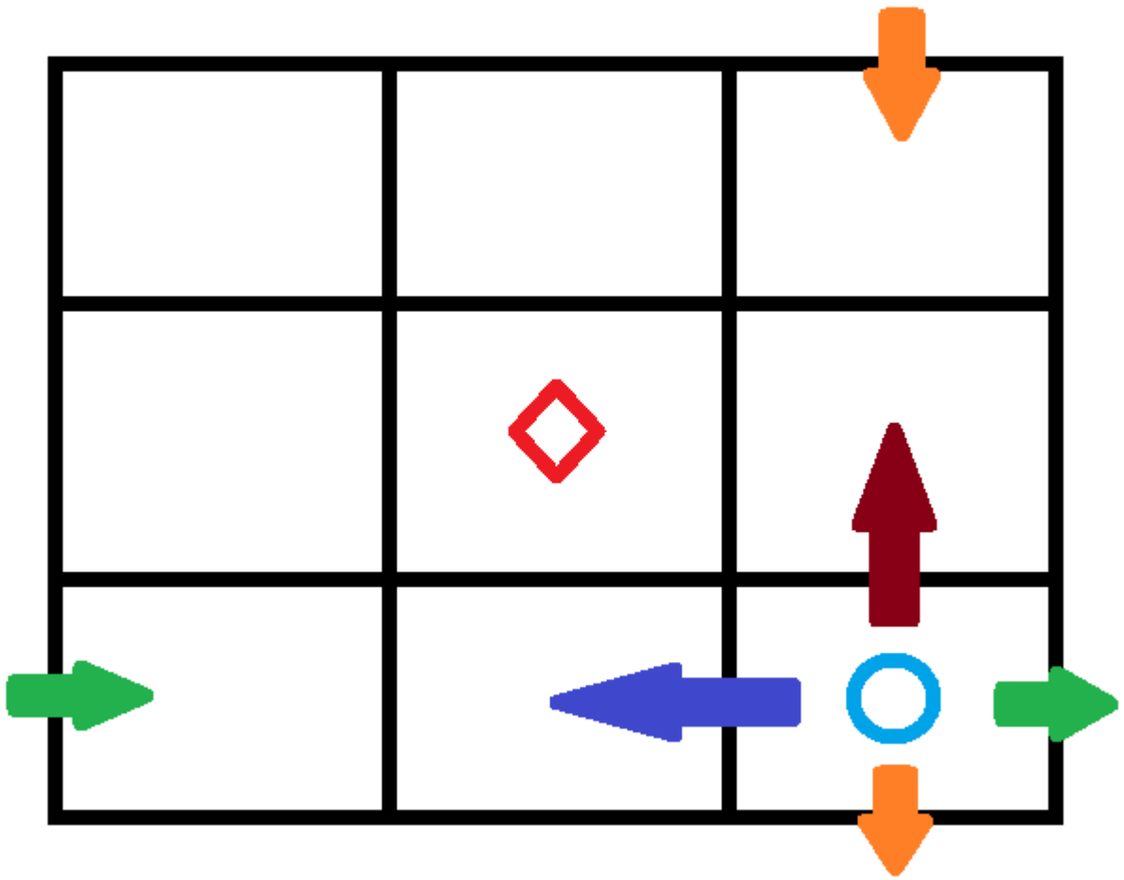
Homework

- You can move in any of the four cardinal directions: `north`, `east`, `west`, and `south`



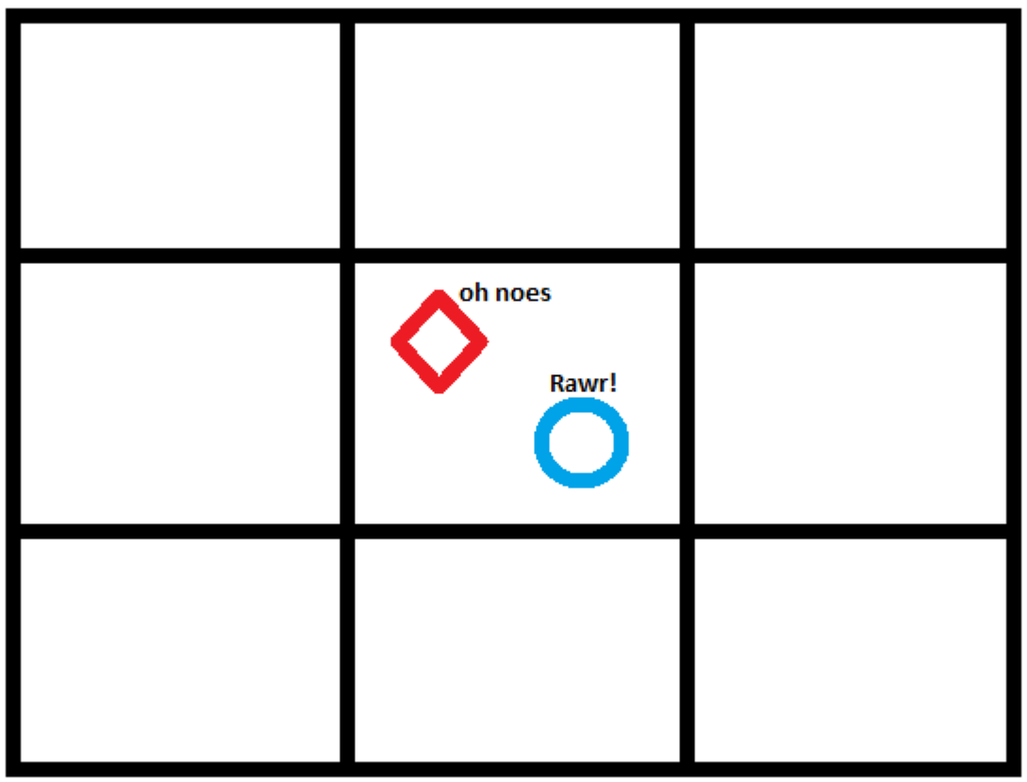
Homework

- But note that the world has no walls and actually wraps around like a Karnaugh map:



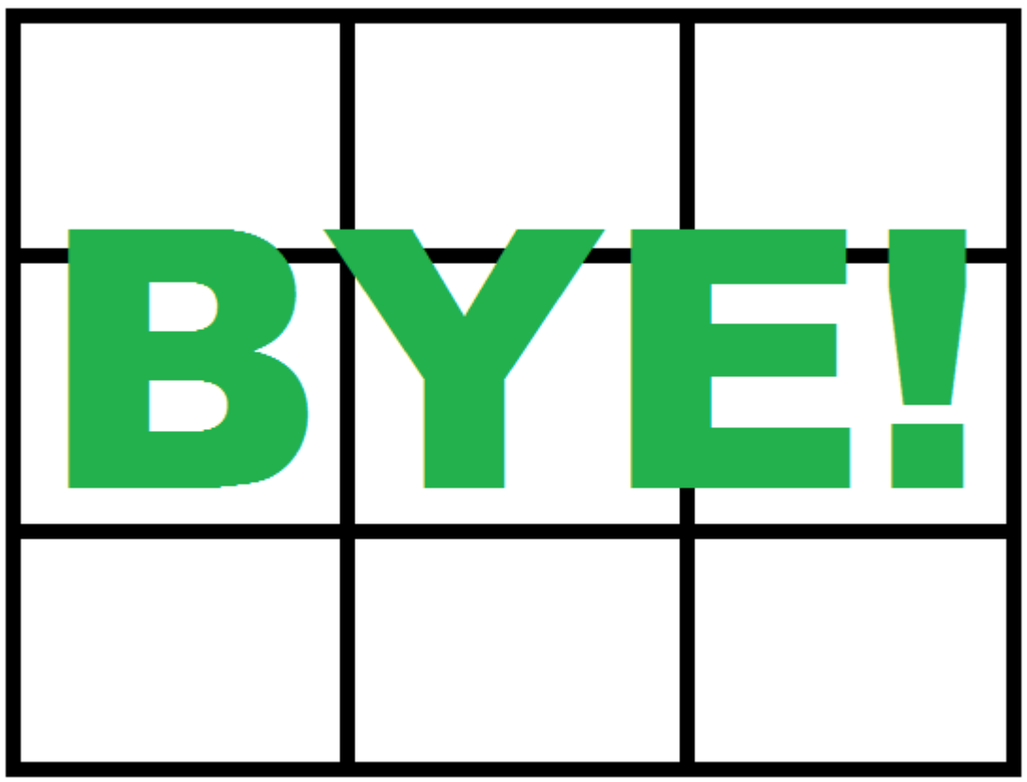
Homework

- You can also `attack` if you're in the same room as your target:



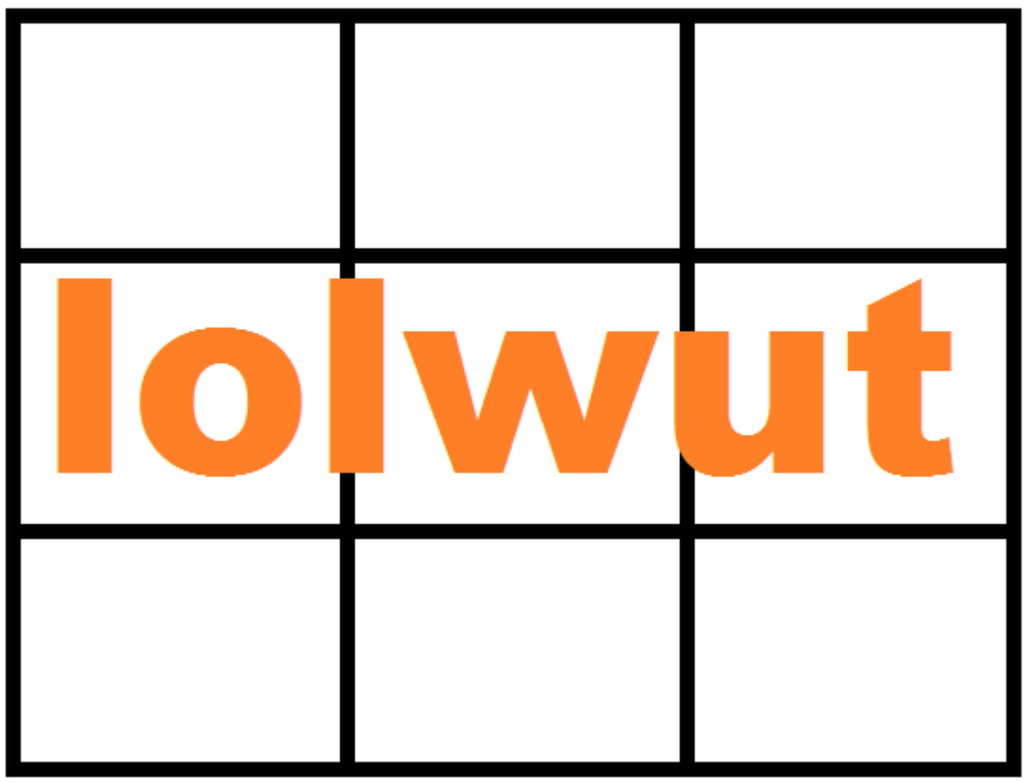
Homework

- And of course, you can `exit` the game
  - Attacking the target should trigger an exit also



Homework

- Any other input is to be treated as an invalid command



Homework

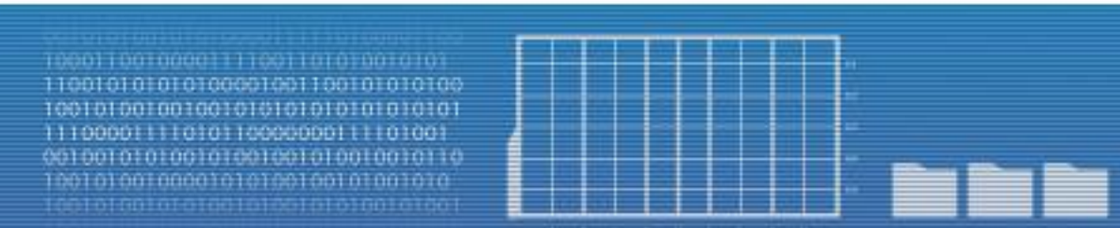
- Your homework is to make a text-based game based on the specs above
- It is up to you how you wish to display the world to the player
- You can use a simple MUD setup wherein you can only see whatever is in the same room as you
  - Example: MUD setup

Homework

- Regardless, you must have an option to display the world and the positions of your character and your target at all times
- Can be always on or simply toggled either at the start via command-line argument or at anytime during the game via a command
  - Example: Omniscient setup

Homework

- Note that commands are not allowed to be chained (example: `north north` or `n n` should not trigger going north twice and should be treated as an invalid command)



DISCS

Homework

- Your program must be scalable
- The following should be changeable by simply editing the contents of the corresponding variable:
  - Size of the world (W x H grid)
  - Player starting position
  - Target starting position