

I/O and intro to variables

Chantilly Robotics (Team 612)

Console input and output

- `#include <iostream>` must be included
- Use `std::cout` to output strings
- Use `std::cin` or `getline(cin, i)`*

*`i` is a `std::string` variable


Basic I/O Example

- Go to <http://cpp.sh>
- Run the Example program

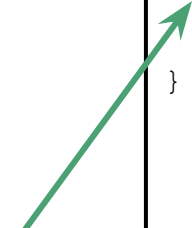
```
// Example program
#include <iostream>
#include <string>

int main()
{
    std::string name;
    std::cout << "What is your name? ";
    getline (std::cin, name);
    std::cout << "Hello, " << name << "!\n";
}
```

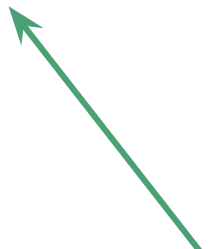
`std::string name;`
declares a variable
named "name"



`getline (std::cin, name);` gets a whole
line from std::cin



`<<` operator inserts
strings and variables
into std::cout



Console input differences

```
std::string n;  
std::cin >> n;
```

Gets user input until
either space or newline
character (enter)

Inputting: "Hello World!"
Will extract "Hello" from cin and store it to
variable n

```
std::string n;  
getline(std::cin, n);
```


Gets user input until
newline character
(enter)

Inputting: "Hello World!"
Will store "Hello World!" to variable n

Output newline character differences


```
std::cout << "Hello World!\n";
```

`\n` insert a newline character



```
std::cout << "Hello World!" <<  
std::endl;
```

`std::endl` insert a newline character and flushes the output buffer



Difference is minimal
(`\n` has slightly better performance)

Homework (on repl.it)

Correct Hello World (if you haven't already)

Over the next couple of weeks, you will be tasked with introducing adventurers to a world you create.

The first step is to get to know your character.

Ask the player for their character's name and class (mage, rogue, warrior, etc).

These can be whatever you want them to be.

Store these values in variables (`std::strings`). We will use them next time.