PIC 10A Week 1 Tuesday

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What is C++?

- Programming language for applications that are very demanding on performance, energy consumption, and speed.
- C++ is a good choice when you are concerned about response time.

Where C++ is used?

- C++ is used in a wide variety of fields
- Camera, cell phone, cars, self-driving cars, Mars rovers, telescopes, game industries, animations, etc.

Why learn C++?

- Good to learn fundamentals of programming (how to work with data structures, how to write algorithms, how to work with hardwares, etc)

Some Basics

```cpp
#include <iostream>

int main()
{
    return 0;
}
```

Some Basics - Hello World!

```cpp
#include <iostream>

int main()
{
    std::cout << "Hello World!" << std::endl;
    return 0;
}
```

Some Basics - Hello World!

```cpp
#include <iostream>

using namespace std;

int main()
{
    cout << "Hello World!" << endl;
    return 0;
}
```

Some Basics

```cpp
#include <iostream>

#include "iostream"
```

Some Basics

```cpp
#include <iostream>
// look in the directory where the
// standard libraries are kept.

#include "iostream"
// look in the current directory then look
// in the directory where the standard
// libraries are kept.
```

How to comment

```
// One line comment
```

How to comment

```
// One line comment

// You can comment multiple lines
// using multiple slashes.
// But
```

How to comment

```
// One line comment

/* You can comment multiple lines
   using multiple slashes.
   But this is much better. */
```

Running c++ on terminal/command prompt

Compilation

```
g++ main.cpp -o compiledprogram
```

Execution

```
./compiledprogram
```