Lec 2: Variables, Data types, and I/O

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PIC 10A, Discusion section 3B
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Outline

Logistics

Office hour: Thursday 3pm- 5pm;

Location: PIC Lab.

Hello World

```
// The hello world program
#include <iostream>
using namespace std;
int main()
{
  cout<<"Hello World!" <<endl;
  return 0;
}
```

Variables

- You can think of a object as a "box" into which you can put a value of the object's type;
- A named object is called a variable and has a specific data type;
- We should use legal and meaningful names to locate the variable;
- The data type will determine what can be put into the "box", and what operations can be performed.
- We can do nothing of interest with a computer without storing data in memory;

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- `double`. High precision real values.

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Boolean types

- `bool`. Represents two states (true or false).

Data types

- Different types take up different amount of space;
- All data is internally represented by 1's and 0's;
- It's always a good practice to initialize the declared variable.

Data types in action.

Basic calculations

The five arithmetical operations supported by C++ are:

- + addition
- - subtraction
- * multiplication
- / division
- % modulo