# Object-Oriented Programming Using C++

## Input-Output and Namespace

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# Introduction

- C++ programming gives you a clear understanding about Object Oriented Programming
- Developed by Bjarne Stroustrup starting in 1979 at Bell Labs

# Hello World in C++

**hello world!!**

```
#include <iostream>
using namespace std;

// main() is where program execution begins.
int main() {
   cout << "Hello World"; // prints Hello World
   return 0;
}
```

# Input/Output in C++

## cin/cout

```
#include <iostream>
using namespace std;

int main() {
   char name[50];

   cout << "Please enter your name: ";
   cin >> name;
   cout << "Your name is: " << name << endl;
}
```

## Output

```
Please enter your name: cplusplus
Your name is: cplusplus
```

# Namespace

- Designed to be used as additional information to differentiate similar functions, classes, variables etc. with the same name available in different libraries
- Using namespace, you can define the context in which names are defined. In essence, a namespace defines a scope

**Defining a namespace**

```
namespace namespace_name {
   // code declarations
}
```

**Calling a namespace-enabled version**

```
// code could be variable or function.
name::code;
```

# Example: Namespace

**Function with the same name in two different namespaces**

```
#include <iostream>
using namespace std;
namespace first_space {
   void func() {
      cout << "Inside first_space" << endl;
   }
}
namespace second_space {
   void func() {
      cout << "Inside second_space" << endl;
   }
}
int main () {
   first_space::func();
   second_space::func();
   return 0;
}
```

**Output**

```
Inside first_space
Inside second_space
```

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