

# C++ Classes/Objects

C++ is an object-oriented programming language.

Everything in C++ is associated with classes and objects, along with its attributes and methods. For example: in real life, a car is an **object**. The car has **attributes**, such as weight and color, and **methods**, such as drive and brake.

Attributes and methods are basically **variables** and **functions** that belongs to the class. These are often referred to as "class members".

A class is a user-defined data type that we can use in our program, and it works as an object constructor, or a "blueprint" for creating objects.

## Create a Class

To create a class, use the **class** keyword:

### Example

Create a class called "MyClass":

```
class MyClass {           // The class
public:                   // Access specifier
    int myNum;            // Attribute (int variable)
    string myString;      // Attribute (string variable)
};
```

### Example explained

- The **class** keyword is used to create a class called **MyClass**.
- The **public** keyword is an **access specifier**, which specifies that members (attributes and methods) of the class are accessible from outside the class. You will learn more about [access specifiers](#) later.
- Inside the class, there is an integer variable **myNum** and a string variable **myString**. When variables are declared within a class, they are called **attributes**.
- At last, end the class definition with a semicolon **;**.

# Create an Object

In C++, an object is created from a class. We have already created the class named `MyClass`, so now we can use this to create objects.

To create an object of `MyClass`, specify the class name, followed by the object name.

To access the class attributes (`myNum` and `myString`), use the dot syntax (`.`) on the object:

## Example

Create an object called `myObj` and access the attributes:

```
class MyClass {           // The class
public:                   // Access specifier
    int myNum;            // Attribute (int variable)
    string myString;      // Attribute (string variable)
};

int main() {
    MyClass myObj;        // Create an object of MyClass

    // Access attributes and set values
    myObj.myNum = 15;
    myObj.myString = "Some text";

    // Print attribute values
    cout << myObj.myNum << "\n";
    cout << myObj.myString;
    return 0;
}
```