

DAILY ASSESSMENT FORMAT

Course:	C++	Name:	Bindu.N.R
Link :	https://www.sololearn.com/	USN:	4AL17EC101
Org By:	SOLOLEARN	Semester & Section:	6-B
Github Repository:	bindunr-python	Date:	26/06/2020

Topic Completed Today

The screenshot shows the SoloLearn C++ interface. The top navigation bar is blue with the SoloLearn logo, the text 'Classes and Objects', and a user profile icon with 'XP 264'. The main content area is a grid of topic cards, each with a title, progress indicator (e.g., 1/7), and a green bar indicating the number of questions completed (e.g., 4 questions) with a checkmark. The topics are: 'What is an Object' (4 questions), 'What is a Class' (3 questions), 'Example of a Class' (3 questions), 'Abstraction' (3 questions), 'Encapsulation' (2 questions), 'Example of Encapsulation' (4 questions), 'Constructors' (3 questions), and 'Module 5 Quiz' (5 questions). The right sidebar shows the user profile for 'BINDU N R' with a 'Reset' and 'Sign out' button. The bottom right corner has a copyright notice: '© 2020 SoloLearn Inc.'

The screenshot shows the SOLOLEARN website interface. The header includes the SOLOLEARN logo, a 'More On Classes' link, and a user profile for 'BINDU N R' with a 'Reset' and 'Sign out' option. The main content area displays a grid of 12 topics, each with a progress indicator (e.g., 1/10, 2/10) and a quiz status (e.g., 4 questions, 6 questions). The topics are arranged in a 3x4 grid:

Separate Files for Classes 1/10 4 questions ✓	Destructors 2/10 6 questions ✓	Selection Operator 3/10 5 questions ✓	Const Objects 4/10 4 questions ✓
Member Initializers 5/10 4 questions ✓	Composition, Part 1 6/10 3 questions ✓	Composition, Part 2 7/10 3 questions ✓	The Friend Keyword 8/10 3 questions ✓
The This Keyword 9/10 4 questions ✓	Operator Overloading 10/10 4 questions ✓	Module 6 Quiz 7 questions ✓	

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C++ Classes and Objects

Class: A class in C++ is the building block, that leads to Object-Oriented programming. It is a user-defined data type, which holds its own data members and member functions, which can be accessed and used by creating an instance of that class. A C++ class is like a blueprint for an object.

For Example: Consider the Class of **Cars**. There may be many cars with different names and brand but all of them will share some common properties like all of them will have 4 wheels, Speed Limit, Mileage range etc. So here, Car is the class and wheels, speed limits, mileage are their properties.

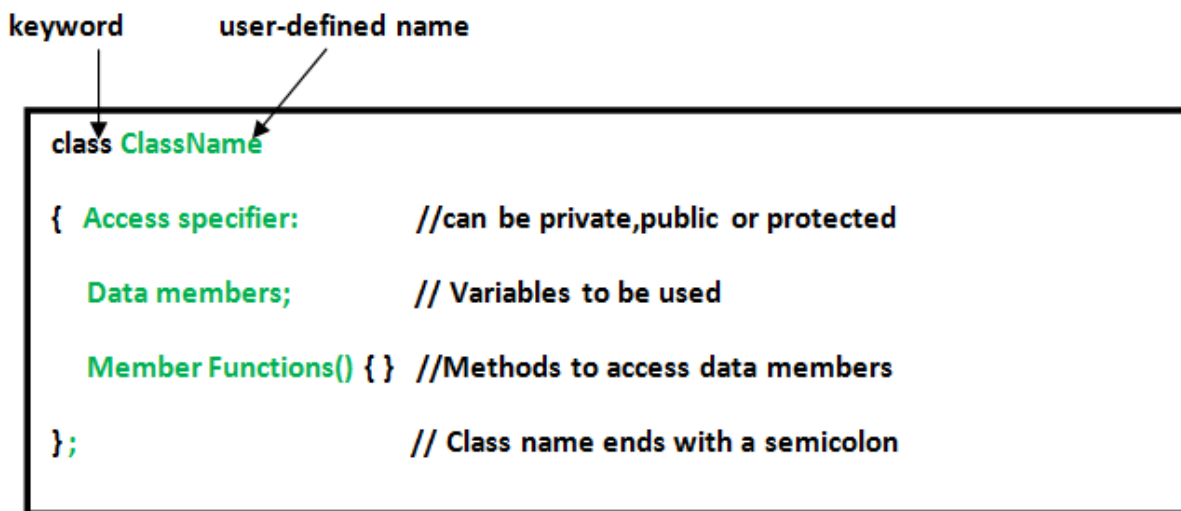
- A Class is a user defined data-type which has data members and member functions.

- Data members are the data variables and member functions are the functions used to manipulate these variables and together these data members and member functions defines the properties and behavior of the objects in a Class.
- In the above example of class Car, the data member will be speed limit, mileage etc and member functions can be apply brakes, increase speed etc.

An **Object** is an instance of a Class. When a class is defined, no memory is allocated but when it is instantiated (i.e. an object is created) memory is allocated.

Defining Class and Declaring Objects

A class is defined in C++ using keyword class followed by the name of class. The body of class is defined inside the curly brackets and terminated by a semicolon at the end.



Declaring Objects: When a class is defined, only the specification for the object is defined; no memory or storage is

allocated. To use the data and access functions defined in the class, you need to create objects.

Syntax:

ClassName ObjectName:

Accessing data members and member functions: The data members and member functions of class can be accessed using the dot('.') operator with the object. For example if the name of object is *obj* and you want to access the member function with the name *printName()* then you will have to write *obj.printName()* .

Accessing Data Members

The public data members are also accessed in the same way given however the private data members are not allowed to be accessed directly by the object. Accessing a data member depends solely on the access control of that data member.

This access control is given by Access modifiers in C++. There are three access modifiers : **public, private and protected.**