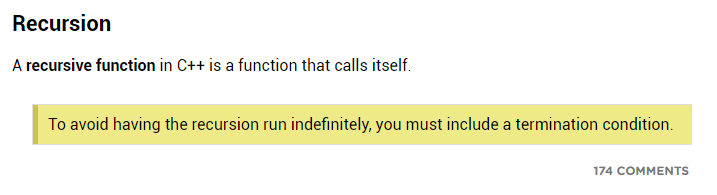
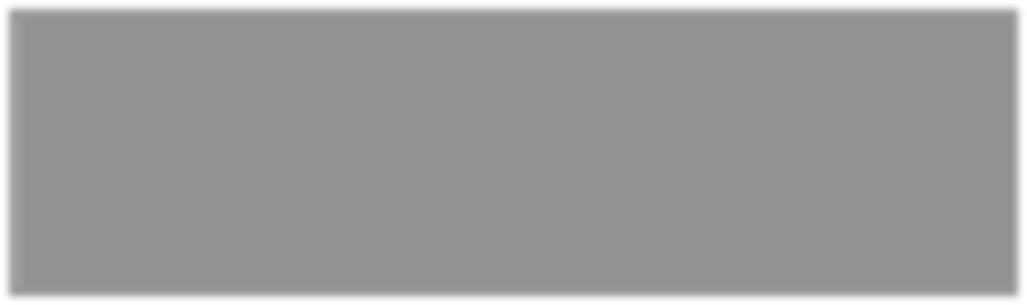
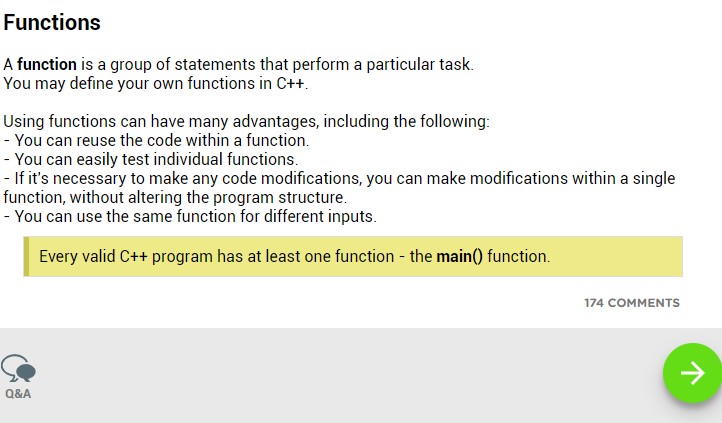
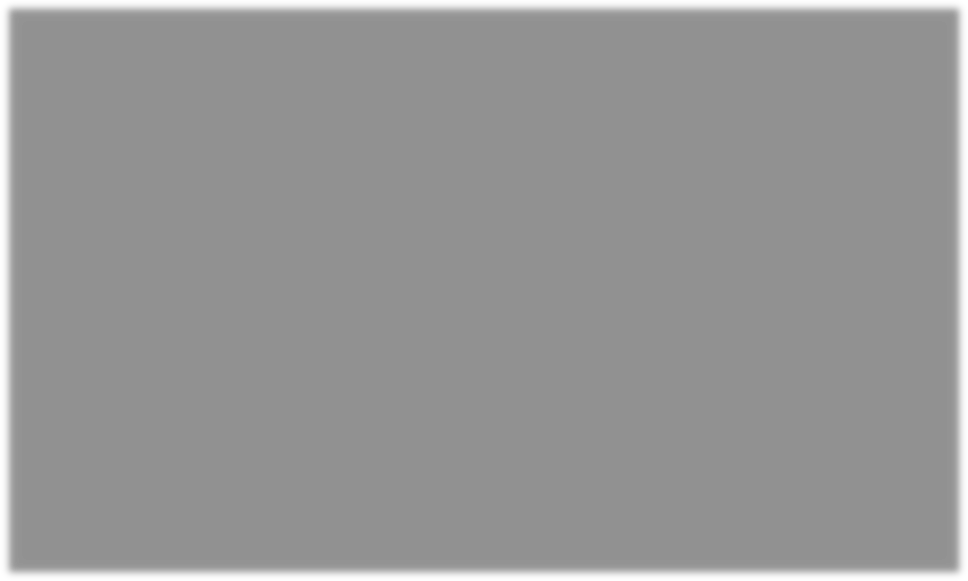
DAILY ASSESSMENT



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| --- | --- | --- | --- |
| **Date:** | **23/06/2012** | **Name:** | **Rashmi KB** |
| **Course:** | **Programming in C++** | **USN:** | **4AL15EC056** |
| **Topic:** | **Module 3 & 4** | **Semester & Section:** | **8th-B** |
| **GitHub Repository:** | **rashmikb** |  |  |

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| --- |
| **FORENOON SESSION DETAILS** |
| **Image of session** |

What is an Object

ObjectOrientedProgramming isai›graieiningstylethatisintendedtomaketliinkingabout jsrogramining closer to tliinking about the realworld

In

objectsareindejsendentunits,andeachhasitsownidentity,justasobjectsin

the real world do.

Anappleisanobject;soisamug.Eachhasitsuniqueidentity.It’spossibletohavetwo mugsthatlookidentical,buttheyarestillseparate,uniqueobjects

174 COM ME NTB

What is a Class

Objects are created using classes, which are actually the focal point of OOP

The class describes what the object will be, but is sei›arate Iron the object itself.

Inotherwords,aclasscanbedescribedasanobject’sblueprint,description,ordefition

Youcanusethesameclassasabluej›ritIforcreatitgmultipledifferentobjects.Forexample,in preparationtocreatinqanewbuilding,thearchitectcreatesabluej›riit,whichisusedasabasis foractr‹aIIybuildingthestructureThatsameblueprintcanbeusedtocreatemultiplebuildings

Programmingworksinthesamefashion.Wefirstdefineaclass,whichbecomestheblueprintfor creatingobjects.

Each class ha s a name, and describes attributes and behavior.

Inj›rogramminq,thetermtypeisusedtorefertoaclassname:We'recreatinganobjectofa particulartype

Attributes are al so referred to as properties or data.

**REPORT –**

**C++ Functions**

A function is a block of code which only runs when it is called. You can pass data, known as parameters, into a function.

Functions are used to perform certain actions, and they are important for reusing code: Define the code once, and use it many times.

## Create a Function

C++ provides some pre-defined functions, such as main(), which is used to execute code. But you can also create your own functions to perform certain actions.

To create (often referred to as *declare*) a function, specify the name of the function.

## Call a Function

Declared functions are not executed immediately. They are "saved for lateruse", and will be executed later, when they arecalled.

To call a function, write the function's name followed by two parentheses () and a semicolon;

In the following example, myFunction() is used to print a text (the action), when it is called.

## Function Declaration and Definition

A C++ function consist of two parts:

* **Declaration:** the function's name, return type, and parameters (ifany)
* **Definition:** the body of the function (code to beexecuted)

## Parameters and Arguments

Information can be passed to functions as a parameter. Parameters act as variables inside the function. Parameters are specified after the function name, inside the parentheses.

# Function Overloading

With **function overloading**, multiple functions can have the same name with different parameters:

## Example

int myFunction(int x) float myFunction(float x)

double myFunction(double x, double y)

# C++ Classes/Objects

C++ is an object-oriented programming language.

EverythinginC++isassociatedwithclassesandobjects,alongwithitsattributes andmethods.Forexample:inreallife,acarisanobject.Thecarhasattributes, such as weight and color, and methods, such as drive andbrake.

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 classkeyword:

**Example**

Create a class called "MyClass":

classMyClass{ // Theclass

public: // Accessspecifier

intmyNum; // Attribute (int variable) string myString; // Attribute (stringvariable)

};

# 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 theattributes: classMyClass{ // Theclass

public: // Accessspecifier

intmyNum; // Attribute (int variable) string myString; // Attribute (stringvariable)

};

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;

}

# Class Methods

Methods are **functions** that belongs to the class.

There are two ways to define functions that belongs to a class:

* Inside classdefinition
* Outside classdefinition