**DAILY ASSESSMENT FORMAT**

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| **Date:** | **25 June 2020** | **Name:** | **Persis P** |
| **Course:** | **C++ programming** | **USN:** | **4AL17EC069** |
| **Topic:** | **Module 7 : Inheritance and polymorphism** | **Semester & Section:** | **6th sem & B sec** |
| **Github Repository:** |  |  |  |

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

# Inheritance Inheritance is one of the most important concepts of object-oriented programming. Inheritance allows us to define a class based on another class. This facilitates greater ease in creating and maintaining an application.   The class whose properties are inherited by another class is called the Base class. The class which inherits the properties is called the Derived class. For example, the Daughter class (derived) can be inherited from the Mother class (base). The derived class inherits all feature from the base class, and can have its own additional features.

# Polymorphism The word polymorphism means "having many forms". Typically, polymorphism occurs when there is a hierarchy of classes and they are related by inheritance. C++ polymorphism means that a call to a member function will cause a different implementation to be executed depending on the type of object that invokes the function.

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| **Topic:** | **Module 8 : Templates, Exceptions and files** | **Semester & Section:** | **6th sem & B sec** | |
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| **AFTERNOON SESSION DETAILS** | | | |
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# Function Templates Functions and classes help to make programs easier to write, safer, and more maintainable.  However, while functions and classes do have all of those advantages, in certain cases they can also be somewhat limited by C++'s requirement that you specify types for all of your parameters. For example, you might want to write a function that calculates the sum of two numbers, similar to this:int sum(int a, int b) { return a+b; }

# Exceptions Problems that occur during program execution are called exceptions. In C++ exceptions are responses to anomalies that arise while the program is running, such as an attempt to divide by zero.

# Working with Files

Another useful C++ feature is the ability to read and write to files. That requires the standard C++ library called fstream.  
Three new data types are defined in fstream:  
ofstream: Output file stream that creates and writes information to files.  
ifstream: Input file stream that reads information from files.  
fstream: General file stream, with both ofstream and ifstream capabilities that allow it to create, read, and write information to files.  
  
To perform file processing in C++, header files <iostream> and <fstream> must be included in the C++ source file.#include <iostream>  
#include <fstream>

# Working with Files

You can also provide the path to your file using the ofstream objects constructor, instead of calling the open function.#include <fstream>  
using namespace std;  
  
int main() {  
ofstream MyFile("test.txt");  
  
MyFile << "This is awesome! \n";  
MyFile.close();  
}