Lab 3

Polymorphism

Introduction

- Performing the task in different ways
- Object-Oriented Programming Concept
- Inheritance is used to achieve the polymorphism
- Types of Polymorphism :
  - 1] Compile Time
  - 2] Run Time

Compile Time

- Achieved by function overloading the operator overloading.
- Function Overloading: Different functions having the same name but different numbers or type of parameters in the same class.
- Operator Overloading: Make operators work for user-defined classes.

Run time

- Achieved by Function Overriding
- Function Overriding: Derived class defines the same member function already defined in the base class.
- Virtual Function: A virtual function is a member function that is declared within a base class and is re-defined(Overridden) by a derived class.

Virtual Function

- The prototype of virtual functions should be the same in the base as well as derived class.
- Virtual functions should be accessed using pointer or reference of base class type to achieve run time polymorphism.
- Virtual functions cannot be static.
- They are always defined in the base class and overridden in a derived class. The derived class doesn't need to override (or re-define the virtual function), in that case, the base class version of the function is used.
- Concept of late binding and early binding.