# Inheritance and Polymorphism

## Objective

* To use inheritance (“is-a” relationship).
* To use polymorphism.
* To create an abstract class
* To use interface.

## Assignments to be done in this session

1. Create a hierarchy of Employee, Manager, MarketingExecutive in Employee Management System. They should have the following functionality.
   1. Manager with following private members.
      * Petrol Allowance: 8 % of Salary.
      * Food Allowance : 13 % of Salary.
      * Other Allowances : 3% of Salary.

Calculate GrossSalary by adding above allowances. Override CalculateSalary() method to calculate Net Salary. NetSalary. PF calculation should not consider above allowances.

* 1. MarketingExecutive with following private members.
     + Kilometer travel
     + Tour Allowances : Rs 5/- per Kilometer (Automatically generated).
     + Telephone Allowances : Rs.1000/-

Calculate GrossSalary by adding above allowances. Override CalculateSalary(). NetSalary,PF calculation should not consider above allowances.

Implement IPrintable interface for every Employee which will allow to print details of Employee on console.

1. Write a class called MyStack with following members.
   1. integer array
   2. integer variable to store top position
   3. size of the array.

Implement Push() and Pop() operation. Implement ICloneable interface to perform cloning. Write a client application to perform cloning.

1. Create a custom exception class named StackException. The Push()and Pop() method should throw object of StackException when the stack is full or empty respectively.