

Practical-5 (10)

Topics: Object Oriented Programming

1. Develop a class String with appropriate data members. Add suitable methods in the String class:
 - Default constructor
 - Parameterized constructor
 - String length
 - Join strings
 - Compare strings
 - Reverse string
 - Check string is palindrome or not
 - Check word in sentence

Demonstrate usage of the class String & its methods.

2. Develop a class and appropriate program to demonstrate usage of class variable or static variable.
3. Develop a class and appropriate program to demonstrate usage of class methods and static methods. Is there some difference between class method and static method?
4. Develop a class Person with appropriate data members (name, age, bdate, gender) and suitable methods (constructors, set, get, show, etc.)
From the class Person derive a class Student with appropriate data members (semester, py_marks, j_marks, php_marks) and suitable methods (constructors, set, get, show, calc_total, calc_grade, etc.) Make appropriate usage of base class (Person) constructors and methods. Demonstrate usage of the Student class.
From the class Person derive a class Employee with appropriate data members (basic_sal, da, hra, total_sal) and suitable methods* (constructors, set, get, show, calc_da, calc_hra, calc_total_sal, gross_sal, etc.) Make appropriate usage of base class (Person) constructors and methods. Demonstrate usage of the Student class.

*Calculate DA (80% and 70% of basic salary for male & female employees respectively), HRA (10% and 15% of basic salary for male & female employees respectively) and net salary. Also calculate gross (yearly) salary which also includes bonus (50% of basic salary. Give 2% more bonus of basic salary to senior citizen employees).