

Programs/Assignments

Lab-5

Topic: Classes and Objects

Objectives:

- To learn writing, executing and debugging C++ programs related to class and object.

Outcomes:

- After completing this, the students would be able to develop C++ programs applying class and object.

Lab Assignments

1. Write a **class** that has an array of integers as data members and **read()**, **display()**, **find_largest()**, **find_smallest()**, **sum()**, and **find_mean()** as its member functions.
2. Write a C++ program that has a class Employee with data members name, employee ID, designation and basic salary. The program must calculate and display the gross salary. [Gross salary= Basic salary + DA + HRA, DA = 80% of Basic salary, HRA=10% of Basic salary].
3. Define a class to represent a bank account. Include the following data members:
 Name of the account holder
 Account number
 Type of account (use SB for savings and CB for current)
 Balance amount in the account
 Write member functions to deposit an amount in the account, withdraw an amount from the account and display balance amount after each deposit or withdraw.

Home Assignments

1. Make a class Book with data members title, author, publisher, and ISBN number. Memory for all these members should be allocated dynamically. The function of the class should read and display the data.
2. Write a C++ program that has a class Store with data members as Item code and price. The user must enter the quantity of each item and the program must calculate and display the final bill.
3. Write a C++ program that has a class Triangle with an overloaded function Area(). If two sides are entered, then calculate area as $\frac{1}{2} * side1 * side2$. However, if three sides are given, then calculate the area using Heron's formula $[area = \sqrt{(s - side1)(s - side2)(s - side3)}, s = \frac{side1 + side2 + side3}{3}]$