

Assignment

Feb20/ CPP/Assignment 003

Object Oriented Programming (OOP)

Post Graduate Diploma in Advance Computing

February 2020

1. Create a Project called Project056 in Assignment056 with program name Question_056_1 .Define a class Report with the following specification:

Data members :Private

adno 4 digit integer admission number

name 20 characters

marks an array of 5 floating point values

average average marks obtained

GETAVG() a function to compute the average obtained in five subject.

Member function: Public

No argument constructor which initialize all members to 0.

Parameterized constructor as Report(int adno, char name[], float marks[]) (Make use of this keyword).

readInfo() function to accept values for adno, name, marks. Invoke the function
GETAVG()

displayInfo() function to display all data members of report on the screen.

You should give function definitions. create the object of this class on heap.

2. Create a Project called Project056 in Assignment056 with program name Question_056_2.Create a class Test with int rollNo; char name[10]; float marks[3]; as data members in private .and it has below member functions in it.
 1. No argument constructor assign 0 to all members
 2. Parameterized constructor - Test(int, char [],float []);
 3. void accept() –Which accept all the details from user.
 4. void display()–Display all the details from user.
 5. void calculateAvg()– Calculate the average and print it. Write a client code (i.e main() function) to call these functions using Test class object.

3. Create a class batsman with the following specifications:

Private members:

bcode 4 digits code number

bname 20 characters

innings, notout, runs integer type

batavg it is calculated according to the formula –

$\text{batavg} = \text{runs} / (\text{innings} - \text{notout})$

calcavg() Function to compute batavg

Public members:

Write No argument constructor to initialize the object.

readdata() Function to accept value from bcode, name, innings, notout and invoke the function calcavg().

displaydata() Function to display the data members on the screen.

In client code store n batsman details take number from User. Allocate memory on heap to the object .

4. Define a class in C++ with following description:Flight

Private Members

A data member Flight number of type integer

A data member Destination of type string

A data member Distance of type float

A data member Fuel of type float

A member function CALFUEL() to calculate the value of Fuel as per the following criteria

Distance	Fuel
≤ 1000	500
more than 1000 and ≤ 2000	1100
more than 2000	2200

Public Members

1. A function FEEDINFO() to allow user to enter values for Flight Number, Destination, Distance.

2. all function CALFUEL() to calculate the quantity of Fuel.

3. A function SHOWINFO() to allow user to view the content of all the data members.

4. Create and store information of 3 flights .

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5. Construct a class employee with following members.

EmpId, empName, basicSalary, hra, pf, pt, grossSalary, netSalary

Do Following operations

1. hra=20% of basic Salary

2. pf=10% basic salary

3. pt=200rs.

4. Write no-argument and parametrized constructor and also display gross salary and net salary.

Gross salary= basic salary+hra;

Net salary=gross salary-(pt+pf)

5. Employee id should get generated automatically.

6. Create 3 objects of the class and display gross salary and net salary of all.

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6. Define a class to represent a bank account. Include the following members:

Data Members a. Name of the depositor

b. Account number

c. Type of account

d. Balance amount in the account Member functions

a. To assign initial values add Constructors Account number should be generated automatically

b. To deposit an amount

c. To withdraw an amount after checking the balance

d. To display name and balance. (Provide Menu for above)

e. Destructors.

f. add the above information for 'n' customers. (Dynamic)

g. Add Static function to display number of objects created