

Academy of Technology

Department of Computer Science & Engineering, Semester: 5TH

Paper Name: Object Oriented Programming Lab

Paper Code: PCC-CS593

Laboratory Assignment: 6

1. Define a class named FruitJuice with the following description:

Data Members	Purpose
int product_code	stores the product code number
String flavour	stores the flavour of the juice (e.g., orange, apple, etc.)
String pack_type	stores the type of packaging (e.g., tera-pack, PET bottle, etc.)
int pack_size	stores package size (e.g., 200 mL, 400 mL, etc.)
int product_price	stores the price of the product
Member Methods	Purpose
FruitJuice()	constructor to initialize integer data members to 0 and string data members to ""
void input()	to input and store the product code, flavour, pack type, pack size and product price
void discount()	to reduce the product price by 10
void display()	to display the product code, flavour, pack type, pack size and product price

2. The basic salary of employees is undergoing a revision. Define a class called Grade_Revision with the following specifications:

Data Members	Purpose
String name	to store name of the employee
int bas	to store basic salary
int expn	to consider the length of service as an experience
double inc	to store increment
double nbas	to store new basic salary (basic + increment)
Member Methods	Purpose
Grade_Revision()	constructor to initialize all data members
void accept()	to input name, basic and experience
void increment()	to calculate increment based on experience as per the table given below
void display()	to print all the details of an employee

Experience	Increment
Up to 3 years	₹1,000 + 10% of basic
3 years or more and up to 5 years	₹3,000 + 12% of basic
5 years or more and up to 10 years	₹5,000 + 15% of basic
10 years or more	₹8,000 + 20% of basic

Write the main method to create an object of the class and call all the member methods.

3. Define a class called Student to check whether a student is eligible for taking admission in B Tech with the following specifications:

Data Members	Purpose
String name	to store name
int mm	to store marks secured in Maths
int scm	to store marks secured in Science
double comp	to store marks secured in Computer

Member Methods	Purpose
Student()	parameterized constructor to initialize the data members by accepting the details of a student
check()	to check the eligibility for course based on the table given below
void display()	to print the eligibility by using check() function in nested form
Marks	Eligibility
90% or more in all the subjects	Science with Computer
Average marks 90% or more	Bio-Science
Average marks 80% or more and less than 90%	Science with Hindi

Write the main method to create an object of the class and call all the member methods.

4. Define a class Bill that calculates the telephone bill of a consumer with the following description:

Data Members	Purpose
int bno	bill number
String name	name of consumer
int call	no. of calls consumed in a month
double amt	bill amount to be paid by the person
Member Methods	Purpose
Bill()	constructor to initialize data members with default initial value
Bill(...)	parameterised constructor to accept billno, name and no. of calls consumed
Calculate()	to calculate the monthly telephone bill for a consumer as per the table given below
Display()	to display the details
Units consumed	Rate
First 100 calls	₹0.60 / call
Next 100 calls	₹0.80 / call
Next 100 calls	₹1.20 / call
Above 300 calls	₹1.50 / call

Fixed monthly rental applicable to all consumers: ₹125

Create an object in the main() method and invoke the above functions to perform the desired task.

5. Define a class called BookFair with the following description:

Data Members	Purpose
String Bname	stores the name of the book
double price	stores the price of the book
Member Methods	Purpose
BookFair()	Constructor to initialize data members
void input()	To input and store the name and price of the book
void calculate()	To calculate the price after discount. Discount is calculated as per the table given below
void display()	To display the name and price of the book after discount
Price	Discount
Less than or equal to ₹1000	2% of price
More than ₹1000 and less than or equal to ₹3000	10% of price
More than ₹3000	15% of price

Write a main method to create an object of the class and call the above member methods.