

Oops Using C++: Lab Assignments

1. Create structure in C language having members

char m_name[30];

int m_roll_number

Write following functions

void InitStudent();

void Accept();

void Display();

2. Convert this program into structure in C++ and class in C++

3. Write a c++ program to input salesman code, salesman name and sale made in 4 quarters of a year. Calculate total sale & commission as of 12% of total sale & the amount to be returned to company. Print All the information.

4. Write a program for Complex class having

data members :

real,imag;

member functions :

constructor

void Accept();

void Display();

Complex Sum(Complex c1);

5. Write a class Date. Provide the constructors Provide functionality of accepting the date from user, display date in different formats (dd-mm-yyyy or dd-month-yyyy), adding number of days in the date. Also write a function to check whether date is valid date or not.

6. Write a class Stack. Implement stack using array. Provide functions push, pop, isfull, isempty. In main create the object of stack and invoke its methods in menu driven way.

7. Define class bank account with following members Data members name,accountnumber,accounttype,balance member functions constructor

Deposit()

Withdraw()

Display()

in main function test the functionality

8. Book shop maintains the inventory of books that are being sold at the shop. The list includes details such as author title, price publisher and stock position. Whenever customer wants a book, the sales person inputs title and author and system searches the list and displays whether it is available or not. If it is not an appropriate message is displayed. If it is available then System displays book details.

9. Write a C++ program which uses class to store following information of an address-House No, Street, City, State, Pin, and Country.

10. Create an array of 10 complex numbers. Input them and display them.

11. Create following class Item having following data members Code, Name, Quantity, Rate, and Amount. Create an array of 10 items and print the stock report.

12. Write a c++ program to store the following detail of 10 students in array of class objects. Calculate total marks, percentage and result for each student and ask the user to enter a roll number and display the record of that student, in case record found, otherwise display error message.

13. Allocate memory dynamically for one dimensional and two dimensional array by using new operator

14. Write a Matrix class. Allocate memory dynamically in parameterized constructor. Also write default constructor. Write input () and display () functions. Write add (), subtract () and multiply () functions.

15. Write a C++ program to process the sales activity for 20 salesmen. Each salesman deals in separate product and is assigned an annual target. At the end of the month, his monthly sales is added to into the sale till date. At the end of the year, his commission is calculated as follows: If Sale > target sale commission is 25% of extra sales made + 10 % of target. If Sale = target commission is 10% of target else a zero.

16. Write a swap function to pass arguments by address and by reference.

17. Write Array class with members int *arr, int size. Provide parameterised, constructor, copy constructor, destructor.

18. Create class Chair having following members.

data members:

int height

int weight

Sunbeam Infotech

double price;

Color color (use enum for Color)

member functions

parameterless Constructor

parameterized constructor

Input function

Display function

SetPrice function(static)

Destructor

Note: price must be shared by all the objects.

19. Overload the following operators for complex class + , - , * , / , ++ , --

20. Overload the following operators for student class = , < , > , == , <= , >= , !=

21. Define class account with following members

int accountnumber

Date openingdate

int opening balance

person nominee and test all the functionality in main function

22. Define a class Person with following members

Data members name of the person

age of the person

Member functions

constructor

inspector

mutator

facilitators

Inherit class person into class Employee having members

Data members

employee_id

employee_salary

department

Member functions

constructor

inspector

mutator

facilitators

And test all the functionality in main

22. define a class Person with following members

Data members

name of the person

age of the person

Member functions

constructor

inspector

mutator

facilitators

Inherit class person into class student having members

data members

roll_number;

int marks[5];

member functions

constructor

inspector

mutator

facilitators

calculateResult

Calculate the result and percentage and print all on to the console

23. Write a shape class having following functions,

Data member:

double area;

double perimeter;

Member function:

Input

display
calculateArea
calculatePerimeter

Derive Triangle, Circle and Square classes from shape and implement all the functionalities of shape in derived classes.

24. Write a template function for swapping numbers

25. Define class Stack using template to store any kind of data