Computer Science (083) Practical File for Class XII

Index for C++ Programming

SN.	Program Description	Sign.
1.	Write a program to input two numbers m and n and display first m multiples of n.	
2.	Write a program to input day number of a week and display the corresponding day name.	
3.	Write a menu driven program to calculate the volume of a cube, cuboid, or cylinder depending upon user's choice.	
4.	Write a program to read a string and print out the following : 1) No. of capital alphabets, 2) No. of small alphabets, 3) No. of non-alphabets	
5.	Write a program to read a string and print it after replacing each of its capital alphabets by the corresponding small alphabet and each small alphabet by its corresponding capital alphabet.	
6.	Write a program to input 10 elements in an array and then display these elements.	
7.	Write a program to input 10 elements in an array and then display these elements in reverse order.	
8.	Write a program to input elements in a 2D array and then display this array in matrix form.	
9.	Write a program to input elements in a 2D array and then display the sum of main diagonal elements of this array.	
10.	A class STUDENT has 3 data members: **Name, Roll Number, Marks of 5 subjects, Stream** and member functions to input and display data. It also has a function member to assign stream on the basis of the table given below: **Average Marks** **Stream** 96% or more Computer Science 91% - 95% Electronics 86% - 90% Mechanical 81% - 85% Electrical 75% - 80% Chemical 71% - 75% Civil Declare a structure STUDENT and define the member functions. Write a program to define a structure STUDENT and input the marks of ***n*** (<=5) students and for each student allot the stream.	
11.	Define a class student with the following specifications: Private members of the class: Admission Number - An Integer Name - string of 20 characters Class - Integer Roll Number - Integer Public members of the class: getdata() - To input the data showdata() - To display the data Write a program to define an array of 10 objects of this class, input the data in this array and then display this list.	

12.	Define a class **MP** in C++ with following description : Private members : a. MP name of type string b. Party name of type string c. No. of votes received as integer d. Nomination money as float Public members : ➢ A constructor to initialize MP name as NULL, Party name as "Independent" & nomination money as 5000. ➢ A destructor to destruct MP class object. ➢ A function INMP( ) to input data for MP. ➢ A function OUTMP( ) to allow user to view the content of all the data members.	
13.	Write a program that show the concept of Multiple inheritance.	
14.	Create a class student with data members name, class, section, roll No. and function members getdata(), printdata(), and promote(). From this class derive a class 'Sr_std' with additional data member stream. Also include another function member change_stream(). Use these classes in a program.	
15.	Write a program to input the name of a text file from the user and display: a) The number of blanks present in the file. b) The number of lines present in the file. c) The number of capital alphabets present in the file. d) The number of small alphabets present in the file. e) The number of lines starting with a capital alphabet. f) The number of words present in the file. g) The number of digits present in the file. h) to count the number of complete words as ***"to"*** and ***"are"***	
16.	Write a program to input the name of a text file from the user. Then input a string and search for the string in the file. The program should an appropriate message if the file with the given name is not present.	
17.	Write a program to input a text file name, read the contents of the file and create a new file named COPY.TXT, which shall contain only those words from the original file which don't start with an uppercase vowel (i.e., with 'A', 'E', 'I', 'O', 'U'). For example, if the original file contains The First Step To Getting The Things You Want Out Of Life is This: Decide What You Want. - Ben Stein Then the text file COPY.TXT shall contain The First Step To Getting The Things You Want Life is This: Decide What You Want. - Ben Stein	
18.	Write an interactive C++ program to open a text file and then display the following: 1) all the alphabetic characters present in the file. 2) Number of numeric characters present in the file.	
19.	Create a text file (w/o using any C++ program) containing the names of students and their marks in the following format: **Ajay 350** **Vijay 340** where name and marks are separated by either a space or a tab and end of line is a record separator. Write a program to read this file and display the records in two columns name and marks. Within the name column, the students' names are to be left justified and marks are to be right justified in the marks column.	
20.	Declare a structure *telerec* in C++, containing name (20 characters) and telephone number. Write a program to maintain a file of telephone records. The program should allow the following functions on the file: 1) To append records in the file. 2) Display the name for a given telephone number. If the telephone number does not exist then display error message "record not found". 3) Display the telephone number(s) for a given name. If the name does not exist then display error message "record not found".	

21.	A blood bank maintains a data file that contains the following information for every donor: Name, Date of Birth, Telephone number, Blood group. Write a program in C++ to do the following: 1) Given a blood group, display name, date of birth and phone number of all the persons of the given blood group. 2) Append records in the file. 3) Input a telephone number and modify the corresponding record.	
22.	Create two payroll files COMP1.DAT and COMP2.DAT. Each of the files should have the following fields: EmpNo : Integer Name: A string of 20 characters Salary : A floating point no. Both the files should be created in the increasing order of the EmpNo. Your program should then merge the two files and obtain a third file NEWCOMP.DAT. The program should also display the data from all the three files.Do not use arrays for merging and sorting of the files. You can assume that the EmpNo are unique.	

23.	Write a menu driven program in C++ to perform the following functions on a binary file "BOOK.DAT" containing objects of the following class:
	class Book
	{ int BookNo; char Book_name[20];
	public: void enterdetails(); void showdetails();
	int Rbook_no() {return Book_no;}
	int Rbook_name() {return Book_name;}
	
	};
	1. Append Records
	2. Modify a record for a given book no.
	3. Delete a record with a given book no.
	4. Search for a record with a given Book name	