**----------- C++ Programming Assignment ------------**

**(PG-DAC August 2024)**

1. Write a Program to add Two Complex Number Using Structure.
2. Write a Program to Copy String Without strcpy().
3. Write a Program to Print 0-01-010-0101 Number Pattern.

0

01

010

0101

01010

1. Write a Program to perform multiple inheritance for class Bank\_Account as Base class and Saving\_Account & Current\_Account as derived classes. consider suitable data members and member functions.And invoke the same.
2. Implement a program to find out total no. favourite singer in given scenario.-Sham has a playlist of songs, each song has a singer associated with it (denoted by an integer).-Favourite singer of Sham is the one whose songs are the most on the playlist.Count the number of Favourite Singers of Sham.
3. WAP to implement Inheritance, Dynamic polymorphism,RTTI for given scenario.

- Consider a Movie class having attributes as (id,Movie\_Name,Realese\_Date,ticket\_amount)

- Inherite Movie class to Bollywood\_Movie class having attributes (no.of ticktes,rating)

-Method

2.1 cal\_Tick\_amount(){ Tick\_amount =no\_of\_seats \*ticket\_amount)

2.2 display() ->display info of movie

-Inherite Movie class to Hollywood\_Movie class having attributes (no\_of\_actors ,

amount\_per\_actor )

-Method

2.1 cal\_Budget(){Budget =no\_of\_actors \*amount\_per\_actor)

2.2 display() ->display info of movie

Create suitable array to store Movie details.

Provide following options-

1. Add Bollywood\_Movie

2. Add Hollywood\_Movie

3. Display information of all Movies (by invoking display())

4. Invoke cal\_Tick\_amount() and cal\_Budget() using downcasting.

5. Exit

1. Write a program to read and write on a binary file.Create a class voter with data members (voterId, name, city).Accept & Display the details of at least 2 voters.Save that record in file.Append record of voter in a file and display on consol.
2. Check whether given group of strings are anagram or not.

Given an array of strings strs, group the anagrams together. You can return the answer in any order.

Example 1:

Input: strs = ["eat","tea","tan","ate","nat","bat"]

Output: [["bat"],["nat","tan"],["ate","eat","tea"]]

Explanation:

There is no string in strs that can be rearranged to form "bat".

The strings "nat" and "tan" are anagrams as they can be rearranged to form each other.

The strings "ate", "eat", and "tea" are anagrams as they can be rearranged to form each

other.

1. Given a sorted array of distinct integers and a target value, return the index if the target is found. If not, return the index where it would be if it were inserted in order.

Example 1:

Input: nums = [1,3,5,6], target = 5

Output: 2(index of target elelment in array)

Example 2:

Input: nums = [1,3,5,6], target = 2

Output: 1

1. Using a function template write a program to find out minimum value contained in an array.