VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 5_COD_Medium_Static data Members functions

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

An event management company wants to keep track of the participants attending their events. They need a program that allows them to input participant details and search for a specific participant based on their ID. Additionally, the program should keep track of the total number of participants registered.

You are tasked with implementing a program that uses the Event class to manage participant information. The class should have:

A static member variable totalParticipants to store the total number of participants.A member function setParticipant to set the participant's ID

(which should be unique) and name. A member function getParticipantID to retrieve a participant's ID. A member function display to print a participant's ID and name. A static member function getTotalParticipants to return the total number of participants registered.

Answer

```cpp
// You are using GCC
#include<iostream>
#include<vector>
using namespace std;

class Event{
    public:
        static int totalParticipants;
        int participantID;
        string participantName;

        void setParticipant(int id, string name){
            participantID = id;
            participantName = name;
            totalParticipants++;
        }

        int getParticipantID(){
            return participantID;
        }

        void display(){
            cout<<"Participant ID: "<<participantID<<", Name: "<<participantName<<endl;
        }

        static int getTotalParticipants(){
            return totalParticipants;
        }
};

int Event::totalParticipants = 0;

int main(){
    int n;
    cin>>n;
```

```cpp
    vector<Event>participants(n);

    for(int i = 0; i < n; i++){
        int id;
        string name;
        cin>>id;
        cin.ignore();
        getline(cin,name);
        participants[i].setParticipant(id,name);
    }

    int searchID;
    cin>>searchID;
    bool found = false;

    for(int i = 0; i < n; i++){
        if(participants[i].getParticipantID() == searchID){
            cout<<"Participant found: ";
            participants[i].display();
            found = true;
            break;
        }
    }

    if(!found){
        cout<<"Participant with ID "<<searchID<<" not found."<<endl;
    }
    return 0;
}
```

Status : Correct   *Marks : 10/10*