1. Analyse and design classes for a student management system.
2. #include<iostream>
3. #include<string>
4. using *namespace* std;
5. *class* *student*{
6. *string* name;
7. *string* id;
8. *string* email;
9. *string* branch;
11. *public:*
12. student(const *string*&*name*, const *string*&*id*, const *string*&*email*);
13. };
14. *class* *course*{
15. *string* name;
16. *string* code;
17. *string* sem;
18. *public:*
19. course(const *string*&*name*, const *string*&*code*, const *string*&*sem*);
20. };
21. *class* *instructor*{
22. *string* name;
23. *string* id;
24. *string* email;
25. *public:*
26. instructor(const *string*&*name*, const *string*&*id*, const *string*&*email*);
27. };

* To create a student class, its constructor, destructor and member functions.

#include<iostream>

#include<string>

using *namespace* std;

*class* *student*{

*string* name;

*int* age;

*string* rollno;

*int* sem;

*string* address;

*public:*

*void* input();

*void* output();

};

*void* *student*::input()

{

    cout<<"Enter name: ";

    cin>>name;

    cout<<"Enter age: ";

    cin>>age;

    cout<<"Enter the rollno: ";

    cin>>rollno;

    cout<<"Enter semester: ";

    cin>>sem;

    cout<<"Enter the address: ";

    cin>>address;

};

*void* *student*::output()

{

    cout<<"Name of the student: "<<name<<endl;

    cout<<"Age of the student: "<<age<<endl;

    cout<<"Rollno of the student: "<<rollno<<endl;

    cout<<"Sem of the student: "<<sem<<endl;

    cout<<"Address of the student: "<<address<<endl;

}

*int* main()

{

*int* n;

    cout<<"Enter the no of students: ";

    cin>>n;

*student* S[n];

    for(*int* i=0;i<n;i++)

    {

        S[i].input();

        cout<<endl;

        cout<<"Displaying details of "<<i+1<<" student: "<<endl;

        S[i].output();

        cout<<endl;

    }

return 0;

}

* To create a course class, its constructor, destructor and member functions.
* #include<iostream>
* #include<string>
* using *namespace* std;
* *class* *course*{
* *int* sem;
* *string* course\_name;
* *string* course\_id;
* *string* branch;
* *public:*
* *void* input();
* *void* output();
* };
* *void* *course*::input()
* {
* cout<<"Enter Course Name: ";
* cin>>course\_name;
* cout<<"Enter Course ID: ";
* cin>>course\_id;
* cout<<"Enter the Semester: ";
* cin>>sem;
* cout<<"Enter Branch: ";
* cin>>branch;
* }
* *void* *course*::output()
* {
* cout<<"Course Name:"<<course\_name<<endl;
* cout<<"Course ID: "<<course\_id<<endl;
* cout<<"Semester: "<<sem<<endl;
* cout<<"Branch: "<<branch<<endl;
* }
* *int* main()
* {
* *int* n;
* cout<<"Enter no of students: ";
* cin>>n;
* *course* C[n];
* for(*int* i=0;i<n;i++)
* {
* C[i].input();
* cout<<endl;
* cout<<"Displaying details of "<<i+1<<" student: "<<endl;
* C[i].output();
* cout<<endl;
* }
* return 0;
* }