

Experiment 2:

(a) To allocate appropriate access specifiers to data members of student and course class along with justification in comments.

Program: #include<iostream>

using namespace std;

class student //Creation of a class name student

{

private: //Here all the data members are private

int

roll,eng_marks,math_marks,sci_marks,lang2_marks,cs_marks;

char name[20],grade;

double average;

public: //The member functions are made accessible using public keyword

student(); //Creation of constructor

~student(); //Destructor

void getdata(); //Declaration of member function to insert data

void showdata()const; //Declaration of member function to display data

```
void calculate(); //Declaration of member function for  
calculating marks
```

```
int retroll()const;
```

```
};
```

```
//class ends here
```

```
//Creation of course class
```

```
class course{
```

```
private: //Here all the data members are private
```

```
string course_name,course_ID,coursetype;
```

```
int semester;
```

```
public: //The member functions are made accessible using  
public keyword
```

```
course(); //Creation of constructor
```

```
~course(); //Destructor
```

```
void getdata(); //Declaration of member function to insert  
data
```

```
void showdata(); //Declaration of member function to  
display data
```

```
};
```

(b)To add the details of a student using a parameterized constructor of student class.

Program: #include<iostream>

#include<string>

using namespace std;

class stu{

private: string name,email,dept;

int roll,age,phone,sem;

public: stu(string n,string e,string d,int r,int a,int p,int s){

name=n;

email=e;

dept=d;

roll=r;

age=a;

phone=p;

sem=s;

}

void display(){

cout<<"Student Name:"<<name<<endl;

cout<<"Student Email:"<<email<<endl;

```
    cout<<"Student Department:"<<dept<<endl;
    cout<<"Student Rollnumber:"<<roll<<endl;
    cout<<"Student Age:"<<age<<endl;
    cout<<"Student Phonenumner:"<<phone<<endl;
    cout<<"Student Semester:"<<sem<<endl;
}
};

int main(){
    string name,email,dept;
    int roll,age,phone,sem;
    cout<<"Enter Student name:";
    getline(cin,name);
    cout<<"Enter Student email:";
    getline(cin,email);
    cout<<"Enter Student department:";
    getline(cin,dept);
    cout<<"Enter Student rollnumber:";
    cin>>roll;
    cout<<"Enter Student age:";
    cin>>age;
    cout<<"Enter Student phonenumner:";
```

```
cin>>phone;
cout<<"Enter semester:";
cin>>sem;
stu s(name,email,dept,roll,age,phone,sem);
s.display();
return 0;
}
```

```
Enter Student name:abc
Enter Student email:abc@gmail.com
Enter Student department:cse
Enter Student rollnumber:123
Enter Student age:20
Enter Student phonenumber:7654321
Enter semester:4
Student Name:abc
Student Email:abc@gmail.com
Student Department:cse
Student Rollnumber:123
Student Age:20
Student Phonenumber:7654321
Student Semester:4
```