Task 1

```
#include <iostream>
using namespace std;
struct student
{
	int ID[5];
	string name[5], department[5], email[5], number[5];
};
int main ()
{
	student details;
	cout<<"You have to enter record of 5 students.\n\n";

	for(int i=0; i<5; i++)
	{
		cout<<"Enter ID of Student "<<i+1<<" : ";
		cin>>details.ID[i];

		cin.ignore();
		cout<<"Enter Name of Student "<<i+1<<" : ";
		getline(cin,details.name[i]);
		cout<<"Enter Department of Student "<<i+1<<" : ";
		getline(cin,details.department[i]);
		cout<<"Enter Email of Student "<<i+1<<" : ";
		cin>>details.email[i];
		cout<<"Enter Phone number of Student "<<i+1<<" : ";
		cin>>details.number[i];
		cout<<endl;
	}

	cout<<endl;
```

```
for(int i=0; i<5; i++)
{
        cout<<"\nStudent "<<i+1<<" details ";
        cout<<"\nID: "<<details.ID[i];
        cout<<"\nName: "<<details.name[i];
        cout<<"\nDepartment: "<<details.department[i];
        cout<<"\nEmail: "<<details.email[i];
        cout<<"\nPhone number: "<<details.number[i];
        cout<<endl;
}

return 0;
}
```

```
Student 1 details
ID: 23
Name: israr
Department: cs
Email: cs@f.com
Phone number: 345345345

Student 2 details
ID: 23
Name: aerf
Department: bba
Email: bba@c.com
Phone number: 344235345

Student 3 details
ID: 78
Name: rafay
Department: BEE
Email: asd@cc.c
Phone number: 12323443

Student 4 details
ID: 29
Name: Yasir
Department: Software
Email: sdas@ferf.vom
Phone number: 345667556
```

task 2

```
#include<iostream>
using namespace std;
struct Product{
	string name,model;
	int price;
};
void display(Product arr[])
{

	for(int i=0;i<4;i++)
{
	cout<<"\nName : "<<arr[i].name;
	cout<<"\nmodel : "<<arr[i].model;
	cout<<"\nPrice : "<<arr[i].price;
	cout<<endl;
}
}
int main()
{
		Product arr[4];

			for(int i=0;i<4;i++)
			{
				cout<<"Name : ";
				cin>>arr[i].name;
				cout<<"\nmodel : ";
				cin>>arr[i].model;
				cout<<"\nPrice : ";
				cin>>arr[i].price;
			}
```

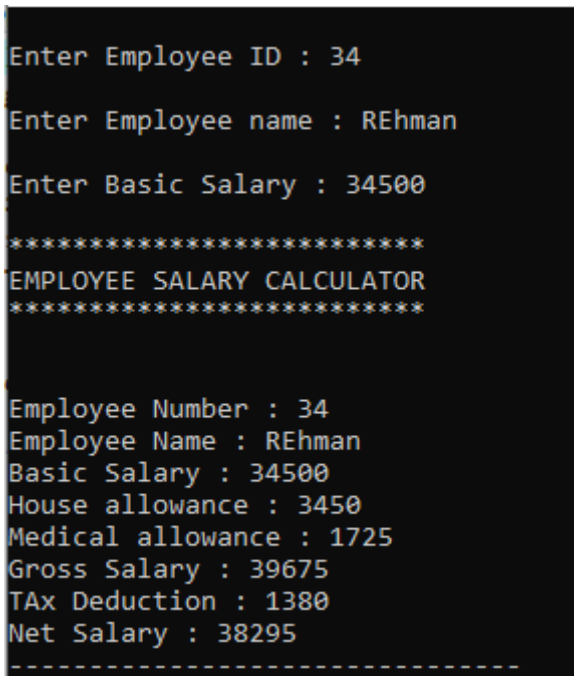
```
                display(arr);


}
```

```
Name : erfer
model : err234
Price : 45

Name : trer
model : 34rwe
Price : 65

Name : erter
model : 34
Price : 767

Name : uiotf
model : 345d
Price : 23
```

Task 3

```
#include<iostream>
using namespace std;

struct Employee{
	int emp_num;
	string emp_name;
	float b_sal,h_all,m_all,tax,g_sal,net_sal;
};

Employee empSalary(Employee );
void display(Employee);
//main
		int main()
		{
			Employee e1,temp;
		cout<<"\nEnter Employee ID : ";
		cin>>e1.emp_num;
		cout<<"\nEnter Employee name : ";
		cin>>e1.emp_name;
		cout<<"\nEnter Basic Salary : ";
		cin>>e1.b_sal;
		temp=empSalary(e1);
		display(temp);


		}

		//function
		Employee empSalary(Employee e1)
		{
```

```
        e1.h_all=0.1*e1.b_sal;
        e1.m_all=0.05*e1.b_sal;
        e1.tax=0.04*e1.b_sal;
        e1.g_sal=e1.b_sal+e1.h_all+e1.m_all;
        e1.net_sal=e1.g_sal-e1.tax;
        return e1;
}
void display(Employee e1){
        cout<<"\n**************************";
        cout<<"\nEMPLOYEE SALARY CALCULATOR";
        cout<<"\n**************************\n\n";
        cout<<"\nEmployee Number : "<<e1.emp_num;
        cout<<"\nEmployee Name : "<<e1.emp_name;
        cout<<"\nBasic Salary : "<<e1.b_sal;
        cout<<"\nHouse allowance : "<<e1.h_all;
        cout<<"\nMedical allowance : "<<e1.m_all;
        cout<<"\nGross Salary : "<<e1.g_sal;
        cout<<"\nTAx Deduction : "<<e1.tax;
        cout<<"\nNet Salary : "<<e1.net_sal;
```




```
}
```

Task 4

```
#include <string>
#include <iostream>
using namespace std;

struct Student {
string name;
int id;
int mark[3];
};

        void display(Student *);
        void inputStudent(Student* ptr);
int main ()

        {
        Student stu;
        Student* stuPtr = &stu;
        inputStudent(&stu);
        display(&stu);



        }
        void inputStudent(Student *ptr)
        {
                cout<<"\nEnter the name of student : ";
                cin>>(ptr)->name;

                cout<<"\nEnter the ID of student : ";
                cin>>(ptr)->id;
```

```
        cout<<"\nEnter the mark 1 of student : ";
        cin>>(ptr)->mark[0];

        cout<<"\nEnter the mark 2 of student : ";
        cin>>(ptr)->mark[1];

        cout<<"\nEnter the mark 3 of student : ";
        cin>>(ptr)->mark[2];



}
void display( Student *ptr)
{
        cout<<"\n  name of student : "<<(ptr)->name;

        cout<<"\n  ID of student :"<<(ptr)->id;

        cout<<"\n  mark 1 of student : "<<(ptr)->mark[0];

        cout<<"\n  mark 2 of student : "<<(ptr)->mark[1];

        cout<<"\n  mark 3 of student : "<<(ptr)->mark[2];
```

```
Enter the name of student : israr

Enter the ID of student : 234

Enter the mark 1 of student : 45

Enter the mark 2 of student : 65

Enter the mark 3 of student : 87

  name of student : israr
  ID of student :234
  mark 1 of student : 45
  mark 2 of student : 65
  mark 3 of student : 87
}
```

Task 5

```
#include <string>
#include <iostream>
using namespace std;

struct Student {
string name;
int id;
int mark[3];
};

        void display(Student *);
        void inputStudent(Student* ptr);
int main ()

        {
        Student stu;
        Student* stuPtr = &stu;
        inputStudent(&stu);
        display(&stu);



        }
        void inputStudent(Student *ptr)
        {
                cout<<"\nEnter the name of student : ";
                cin>>(ptr)->name;

                cout<<"\nEnter the ID of student : ";
                cin>>(ptr)->id;
```

```
        cout<<"\nEnter the mark 1 of student : ";
        cin>>(ptr)->mark[0];

        cout<<"\nEnter the mark 2 of student : ";
        cin>>(ptr)->mark[1];

        cout<<"\nEnter the mark 3 of student : ";
        cin>>(ptr)->mark[2];



}
void display( Student *ptr)
{
        cout<<"\n  name of student : "<<(ptr)->name;

        cout<<"\n  ID of student :"<<(ptr)->id;

        cout<<"\n  mark 1 of student : "<<(ptr)->mark[0];

        cout<<"\n  mark 2 of student : "<<(ptr)->mark[1];

        cout<<"\n  mark 3 of student : "<<(ptr)->mark[2];
```

```
HOw many marks would you like to insert : 2

Enter the name of student : israr

Enter the ID of student : 43

Enter marks of test 1 : 34

Enter marks of test 2 : 65

  name of student : israr
  ID of student :43

Mark 1 : 34
Mark 2 : 65
}
```