Assignment 1

Q1

```c
#include<stdio.h>
#include<string.h>
struct Student{
    int rollno;
    char name[20];
    int marks;
    void display(){
        printf("\n roll no = %d",this->rollno);
        printf("\n name is = %s",this->name);
        printf("\n marks is = %d",this->marks);
    }
    void setrollno(int a){
        this->rollno=a;
    }
    void setname(char* ass){
        strcpy(this->name,ass);
    }
    void setmarks(int m){
    this->marks=m;
    }
    int getroll(){
        return this->rollno;
    }
     char* getname(){
```

```cpp
            return this->name;
        }
        int getmarks(){
            return this->marks;
        }
        Student(){
            this->rollno=0;
            strcpy(this->name,"not given");
            this->marks=0;


    }
    Student(int a,char*str,int arr){
        this->rollno=a;
        strcpy(this->name,str);
        this->marks=arr;


    }

};
main(){
        Student stu;
        stu.setrollno(1);
        stu.setname("Ashutosh");
        stu.setmarks(88);
        stu.display();
        Student stu1(2,"shubham",87);
        stu1.display();
}
```

Q2

```c
#include<stdio.h>
#include<string.h>

struct Employee{
        int id;
        char name[20];
    float salary;
    void display(){
                printf("\n ID = %d",id);
        printf("\n Name = %s",name);
        printf("\n salary = %f",salary);

    }
    void setid(int a){
                this->id=a;
        }
        void setname(char* ass){
                strcpy(this->name,ass);
        }
        void setsalary(float a){

        this->salary=a;
        }
        int getid(){
                return this->id;
        }
          char* getname(){
```

```cpp
            return this->name;
    }
            float getsalary(){
            return this->salary;
    }


    Employee(){
      this->id=0;
      strcpy(this->name,"not given");
      this->salary=0;
    }
    Employee(int a,char*chr,float b){
      this->id=a;
      strcpy(this->name,chr);
      this->salary=b;
    }
};


main(){
     Employee s1,s2(12,"shelke",34345.78);


    s1.setid(1);
    s1.setname("Ashutosh");
    s1.setsalary(85522);
    s1.display();
    s2.display();


    }
```

```c
#include<stdio.h>
#include<string.h>

struct Admin{
        int id;
        char name[20];
    double salary;
  int allowance;
  void display(){
        printf("\n ID = %d",this->id);
        printf("\n Name = %s",this->name);
        printf("\n salary = %lf",this->salary);
        printf("\n allowance is= %d",this->allowance);

}
 void setid(int i){
            this->id=i;
 }
  void setname(const char*chr){
  strcpy(this->name,chr);
  }
  void setsalary(double s){
        this->salary=s;
  }
  void setallowance(int a){
                this->allowance=a;
        }
```

```cpp
    int getid(){
        return this->id;
    }
    char* getname(){
        return this->name;
    }
    double getsalary(){
        return this->salary;
    }
    int getallowance(){
        return this->allowance;
    }
    Admin(){
        this->id=0;
        strcpy(this->name,"not given");
        this->salary=0;
        this->allowance=0;

    }
    Admin(int a,char*str,int b,int arr){
            this->id=a;
            strcpy(this->name,str);
            this->salary=b;
        this->allowance=arr;
    }

};
```

```c
main(){
        Admin a1;
            a1.setid(1);
            a1.setname("shelke");
      a1.setsalary(12552);
    a1.setallowance(4584);
                a1.display();


            Admin a(12,"ashutosh",85263,78547);
            a.display();

    }
```

```c
#include<stdio.h>

#include<string.h>


struct Hr{
        int id;
        char name[20];
    float salary;
    int commission;
    void display(){
        printf("\n ID = %d",id);
        printf("\n Name = %s",name);
        printf("\n salary = %f",salary);
        printf("\n commission is = %d",this->commission);
    }
    void setid(int a){
```

```
                this->id=a;
        }
        void setname(char* ass){
                strcpy(this->name,ass);
        }
        void setsalary(float a){


    this->salary=a;
        }
        void setcommission(int a){
                        this->commission=a;
        }


        int getid(){
                return this->id;
        }
          char* getname(){
                return this->name;
         }
                float getsalary(){
                return this->salary;
        }


        int getcommission(){
                return this->commission;
                }
Hr(){
        this->id=0;
```

```
        strcpy(this->name,"not given");

        this->salary=0;

        this->commission=0;

    }

  Hr(int a,char*chr,int b,int arr){

        this->id=a;

        strcpy(this->name,chr);

        this->salary=b;

        this->commission=arr;

    }


};


int main(){

        Hr str;

        Hr str1(2,"Shelke",7845,8754);

        str.setid(1);

        str.setname("Ashutosh");

        str.setsalary(8523);

        str.setcommission(7854);

        str.display();

        str1.display();

}
```

```
#include<stdio.h>

#include<string.h>


struct SalesManager{
```

```c
        int id;

        char name[20];

float salary;

int  incentive;

int target;

void display(){

        printf("\n ID = %d",this->id);

        printf("\n Name = %s",this->name);

        printf("\n salary = %f",this->salary);

 printf("\n incentive is = %d",this->incentive);

        printf("\n  Target is = %d",this->target);

}

 void setid(int a){

                this->id=a;

        }

        void setname(char* ass){

                strcpy(this->name,ass);

        }

        void setsalary(float a){


    this->salary=a;

        }

        void setincentive(int a){

                        this->incentive=a;

                }


        void settarget(int a){

                        this->target=a;
```

```
        }
int getid(){
        return this->id;
}
 char* getname(){
        return this->name;
  }
        float getsalary(){
        return this->salary;
}


        int getincentive(){
        return this->incentive;
}
int gettarget(){
        return this->target;
}
SalesManager (){
    this->id=0;
      strcpy(this->name,"not given");
      this->salary=0;
      this->incentive=0;
      this->target=0;
}
SalesManager (int a,char*str,float b,int arr,int brr){
    this->id=a;
      strcpy(this->name,str);
      this->salary=b;
```

```cpp
            this->incentive=arr;

            this->target=brr;



    }



};
int main(){

        SalesManager str;

        str.setid(1);

        str.setname("Ashutosh");

        str.setsalary(85239);

        str.setincentive(5421);

        str.settarget(99854);

        str.display();


        SalesManager str1(2,"Shelke",74585,98564,7854);

        str1.display();

}
```

```c
#include <stdio.h>

struct Date{
   int day;
   int month;
   int year;
   void display(){
```

```c
        printf("\nDate details:");
printf("\nDay: %d", this->day);

printf("\nMonth: %d", this->month);

printf("\nYear: %d", this->year);

        }

        void setday(int a){

                this->day=a;

        }

        void setmonth(int a){

                this->month=a;

        }

        void setyear(int a){

                this->year=a;

        }

        int getday(){

                return this->day;

        }

int getmonth(){

                return this->month;

        }

        int getyear(){

                return this->year;

        }

        Date(){

                this->day=0;

                this->month=0;

                this->year=0;

        }
```

```cpp
        Date(int a,int b,int c){

                this->day=a;

                this->month=b;

                this->year=c;


        }


};


int main() {
    Date d;
  d.setday(7);
  d.setmonth(9);
  d.setyear(2002);
  printf("%d/%d/%d",d.getday(),d.getmonth(),d.getyear());
   Date a(23,9,2002);
   a.display();
}
```

Q7

```c
#include <stdio.h>

struct Time {
   int hour;
   int min;
   int sec;
   void display(){
        printf("\nHour: %d",this->hour);
   printf("\nMinutes: %d", this->min);
```

```c
        printf("\nSeconds: %d", this->sec);
    }
    void sethour(int a){
        this->hour=a;
    }
    void setmin(int a){
        this->min=a;
    }
    void setsec(int a){
        this->sec=a;
    }
    int gethour(){
        return this->hour;
    }
    int getmin(){
        return this->min;
    }
    int getsec(){
        return this->sec;
    }
    Time(){
        this->hour=0;
        this->min=0;
        this->sec=0;
    }
    Time(int a,int b,int c){
        this->hour=a;
        this->min=b;
```

```
            this->sec=c;
    }



};


int main() {
    Time T;
  T.sethour(2);
  T.setmin(23);
  T.setsec(12360);
  Time T2(4,8,2002);
T.display();
T2.display();


}
```

```
#include <stdio.h>

struct Distance {
    int feet;
    int inch;
    void display(){
        printf("\nDistance details:");
    printf("\nFeet: %d", this->feet);
    printf("\nInches: %d", this->inch);
        }
```

```cpp
        void setfeet(int a){
                this->feet=a;
        }
        void setinch(int a){
                this->inch=a;
        }
        int getfeet(){
                return this->feet;
        }
        int getinch(){
                return this->inch;
        }
        Distance(){
                this->feet=0;
                this->inch=0;
        }
                Distance(int a,int b){
                this->feet=a;
                this->inch=b;
        }

};

int main() {
    Distance D1,d2(12,89);
    D1.setfeet(12);
    D1.setinch(10);
    D1.display();
```

```c
    // printf("\n%d\n%d",D1.getfeet(),D1.getinch());
    d2.display();
}
```

```c
#include <stdio.h>
struct Complex {
    int real;
    int imaginary;
    void display(){
    printf("\nReal+Imaginary =%d+%di",this->real,this->imaginary);
    // printf("\nImaginary: %d", this->imaginary);
        }
        void setreal(int a){
                this->real=a;
        }
                void setimaginary(int a){
                this->imaginary=a;
        }
        int getimaginary(){
                return this->imaginary;
        }
        int getreal(){
                return this->real;
        }
        //defoult Constructer
        Complex(){
                this->real=0;
                this->imaginary=0;
```

```
        }
        //parametrize constructor
        Complex(int a,int b){
                this->real=a;
                this->imaginary=b;
        }
};


int main() {
    Complex C1;
    C1.display();
    Complex C2(15,85);
    C2.display();
}
```

Q 10

```
#include <stdio.h>
#include<string.h>
struct Product {
    int id;
    char name[50];
    int quantity;
    float price;
    void display(){

    printf("\nProduct  details:");
    printf("\nID: %d", id);
    printf("\nName: %s",name);
    printf("\nQuantity: %d",quantity);
```

```c
		printf("\nPrice: %f",price);


	}
	void setid(int i){

		this->id=i;

	}
	void setname(char*chr){

		strcpy(this->name,chr);

	}
	void setquantity(int i){

		this->quantity=i;

	}
	void setprice(float i){

		this->price=i;

	}
	int getid(){

		return this->id;

	}
	char* getname(){

		return this->name;

	}
	int getquantity(){

		return this->quantity;

	}
	int getprice(){

		return this->price;

	}
	Product(){
```

```cpp
            this->id=0;

            strcpy(this->name,"not given");

            this->quantity=0;

            this->price=0;

        }

        Product(int a,char* chr,int b,float c){

            this->id=a;

            strcpy(this->name,chr);

            this->quantity=b;

            this->price=c;

        }

};


int main() {
    Product P1,P2(2,"lenovo",5,8523);


    P1.setid(1);

    P1.setname("hp victus");

    P1.setquantity(3);

    P1.setprice(152000);
   // char* ass=P1.getname();

   // printf("%s",ass);



    P1.display();

    P2.display();

}
```