Q1

```cpp
#include<iostream>

using namespace std;

class Book{
        int bid;
        char name[20];
        double price;
        char author[20];
        static int count;
        public:
                Book(){
                        this->bid=0;
                        strcpy(this->name,"not given");
                        this->price=0.0;
                        strcpy(this->author,"not given");
                        count++;
                }
                Book(int id,char*name,double price,char*author){
                        this->bid=id;
                        strcpy(this->name,name);
                        this->price=price;
                        strcpy(this->author,author);
                        count++;
                }
```

```c
void setid(int id){
    this->bid=id;
}
void setname(char*name){
    strcpy(this->author,name);
}
void setprice(double price){
    this->price=price;
}
void setauthor(char*au){
    strcpy(this->author,au);
}
int getid(){
    return this->bid;
}
char* getname(){
    return this->author;
}
double getprice(){
    return this->price;
}
char* getauthor(){
    return this->author;
}
void display(){
```

```cpp
            cout<<"Book id = "<<this->bid<<endl;

            cout<<"name is = "<<this->name<<endl;

            cout<<"price is = "<<this->price<<endl;

            cout<<"author is = "<<this->author<<endl;

        }
        int static getcount(){

            return count;

        }
        ~Book(){

        cout<<"Districter call = "<<this->bid<<endl;

        count--;

    }

};
int Book::count=0;
int main(){

    Book B1(1,"shv",986,"dfv");

    Book B2(2,"sdv",9632,"evads");

    Book B3(3,"wevd",956,"evad");

    cout<<"Count is = "<<Book::getcount();

}
```

Q2
```cpp
#include<iostream>

using namespace std;

class Product{
```

```cpp
    int pid;
    char pname[20];
    double price;
    int quantity;
    static double discount;
public:
    void display(){
        cout<<"Product id is = "<<this->pid<<endl;
        cout<<"Product name = "<<this->pname<<endl;
        cout<<"price is = "<<this->price<<endl;
        cout<<"Quantity = "<<this->quantity<<endl;
        cout<<"Final price is = "<<this->finalprice()<<endl;
    }
    Product(){
        this->pid=0;
        strcpy(this->pname,"not given");
        this->price=0;
        this->quantity=0;
    }
        Product(int id,char*name,double price,int quantity){
        this->pid=id;
        strcpy(this->pname,name);
        this->price=price;
        this->quantity=quantity;
    }
```

```cpp
        double getprice(){
                return this->price;
        }
        double static getdiscount(){
                return discount;
        }
        double finalprice(){
                return this->price-(this->getprice()*(discount/100));
        }
        ~Product(){
                cout<<"destructer call"<<endl;;
        }
        void static setdiscount(double dis){
                discount=dis;
        }


};
    double Product::discount=10.5;
    int main(){
        cout<<Product::getdiscount()<<endl;
        Product::setdiscount(11.2);
        cout<<Product::getdiscount()<<endl;
        Product P1(12,"SEgrfv",8654,5);
```

```cpp
        P1.finalprice();

        P1.display();

        Product*ptr[5];

        ptr[0]=new Product();

                ptr[1]=new Product(1,"SEgrfv",8654,5);

        //      ptr[1]->display();

          delete ptr[0];

        }
```

Q3

```cpp
#include<iostream>

using namespace std;

class Shirt{

int sid;

char sname[20];

char type[20];

double price;

char size[20];

static double dis_percent;

static int count;

public:

        void display(){

                cout<<"Shirt id is = "<<this->sid<<endl;

                cout<<"Shirt name = "<<this->sname<<endl;

                cout<<"Type is = "<<this->type<<endl;

                cout<<"price is = "<<this->price<<endl;
```

```cpp
        cout<<"Size is = "<<this->size<<endl;
}
Shirt(){
        this->sid=0;
        strcpy(this->sname,"not given");
        strcpy(this->type,"not given");
        this->price=0.0;
        strcpy(this->size,"not given");
        count++;
}
Shirt(int id,char*name,char*type,double price,char*size){
        this->sid=id;
        strcpy(this->sname,name);
        strcpy(this->type,type);
        this->price=price;
        strcpy(this->size,size);
        count++;
}
~Shirt(){
        cout<<"Destructer are call for = "<<this->sname;
        count--;
}
double finalprice(){
        int a = strcasecmp(this->size,"small");
        if(a==0){
```

```cpp
                return this->price;
        }
        a = strcasecmp(this->size,"medium");
         if(a==0){
                return this->price*(1+((dis_percent/100)*1));
        }
        a = strcasecmp(this->size,"large");
        if(a==0){
                return this->price*(1+((dis_percent/100)*2));
        }
        a = strcasecmp(this->size,"xlarge");
        if(a==0){
                return this->price*(1+((dis_percent/100)*3));
        }
        return this->price;
    }
    int static getcount(){
        return count;
    }
    void static set_dis_percent(double per){
        dis_percent=per;
    }
};
 double Shirt::dis_percent=10;
 int Shirt::count=0;
```

```cpp
int main(){
    Shirt S(12,"g-style","wge",1000,"medium");
    S.display();
    cout<<"Final price is = "<<S.finalprice()<<endl;
    cout<<"count is "<<Shirt::getcount()<<endl;
}
```