

## ADS LAB 05

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All types of Inheritance

**Source code :**

```
#include <iostream>
#include<string.h>
using namespace std;
    class stationery {
    public:
    float boughtprice = 600.00;
    float mrp = 700.00;
    };
//Single level inheritance.
    class offer: public stationery {
    public:
    float offerprice = 25.00;
    };
//Multi level inheritance.
    class final: public offer {
    public:
    float finalprice = mrp-offerprice;
    };
    class product {
    public:
    string pr1 = "Ball point pen";
    string pr2 = "Notebook";
    string pr3 = "Chart";
    };
//Multiple inheritance.
    class price: public final, product {
    public:
    void display() {
        float prices = stationery :: mrp;
```

```

        cout<<"The price without offer is : Rs."<<prices<<endl;
        cout<<"The offer discount is : Rs."<<offer :: offerprice<<endl;
        cout<<"The price with discount is : Rs."<<final :: finalprice<<endl;
    }
};
//Hybrid inheritance.
class want: public offer,product {
    private:
        int a;
        string p;
    public:
        void get() {
            cout<<"The product in the stationery is :
"<<"\n"<<pr1<<"\n"<<pr2<<"\n"<<pr3<<"\n"<<endl;
            cout<<"Enter the product needed : "<<endl;
            cin>>p;
            cout<<"No. of products needed : "<<endl;
            cin>>a;
        }
        void productprice() {
            cout<<"The product you asked : "<<p<<endl;
            cout<<"Price of the product : Rs."<<mrp<<endl;
            cout<<"The total price of the "<<a<<" products is : Rs."<<a * stationery ::
mrp<<endl;
            cout<<"The offer discount is : Rs."<<offer :: offerprice<<endl;
            cout<<"The price of the "<<a<<" products with discount is : Rs."
<<(a*stationery::mrp)-(a*offer::offerprice)<<endl;
        }
};
//Hierarchical inheritance
class buy: public product, offer {
    private:
        int x,i,j;
        string y[10];
    public:
        void bought() {
            cout<<"No. of products buying : "<<endl;
            cin>>x;
            cout<<"Enter the products needed : "<<endl;
            for(j=0;j<x;j++){

```

```

        cin>>y[j];
    }
    cout<<"The price of the "<<x<<" products are : Rs.";
    for(i=0;i<x;i++){
        cout<<mrp<<"\t";
    }
    cout<<"\n"<<"Total price of the products are : Rs."<<x*mrp<<endl;
    cout<<"Price of the product with discount : Rs."<<(x*mrp)-
(x*offerprice)<<endl;
    }
};

int main(void) {
    offer s1;
    final f1;
    price p1;
    want w1;
    buy b1;
    cout<<"\t STATIONERY MANAGEMENT \t"<<endl;
    cout<<"Bought Price : Rs."<<s1.boughtprice<<endl;
    cout<<"MRP : Rs."<<s1.mrp<<endl;
    cout<<"Offer price : Rs."<<s1.offerprice<<endl;
    cout<<"Final price : Rs."<<f1.finalprice<<endl;
    p1.display();
    w1.get();
    w1.productprice();
    b1.bought();
    return 0;
}

```

## OUTPUT :

```
Bought Price : Rs.600
MRP : Rs.700
Offer price : Rs.25
Final price : Rs.675
The price without offer is : Rs.700
The offer discount is : Rs.25
The price with discount is : Rs.675
The product in the stationery is :
Ball point pen
Notebook
Chart

Enter the product needed :
chart
No. of products needed :
2
The product you asked : chart
Price of the product : Rs.700
The total price of the 2 products is : Rs.1400
The offer discount is : Rs.25
The price of the 2 products with discount is : Rs.1350
No. of products buying :
2
Enter the products needed :
Pen
Notebook
The price of the 2 products are : Rs.700    700
Total price of the products are : Rs.1400
Price of the product with discount : Rs.1350
```