

**Q1. Write a C++ Program to shown the concept of Function Overriding also define a specific problem where we can use this concept for solving the specified problem using the Function Overriding.**

```
#include <iostream>

using namespace std;

class Base {
public:
    void print() {
        cout << "Base Function" << endl;
    }
};

class Derived : public Base {
public:
    void print() {
        cout << "Derived Function" << endl;
    }
};

int main() {
    Derived derived1;
    derived1.print();
    return 0;
}
```

```
Derived Function
```

**Q2. Write a C++ program to create a class shopping list which contains the details about a departmental store. The class include the various attribute like item code number, item price, etc. The class have the various operation like adding, deleting item to the list and printing the total value of a order. The shopping list class drive a new class house hold list. Create an override function of shopping list class and define the function body in derived class. In overriding, the**

**function names and parameter lists are same in both the functions. Also, write the calling mechanism of both the member function inside the main function.**

```
#include<iostream>
```

```
using namespace std;
```

```
const int m = 50;
```

```
class ITEMS
```

```
{
```

```
    int itemCode[m];
```

```
    float itemPrice[m];
```

```
    int count;
```

```
    public:
```

```
        void CNT(void){count = 0;}    //Initializes count = 0
```

```
        void getitem(void);
```

```
        void displaySum(void);
```

```
        void remove(void);
```

```
        void displayItems(void);
```

```
};
```

```
//Function definitions
```

```
void ITEMS :: getitem(void)
```

```
{
```

```
    cout<<"Enter Item Code: ";
```

```
    cin>>itemCode[count];
```

```
    cout<<"Enter Item Cost: ";
```

```
    cin>>itemPrice[count];
```

```
    count++;
```

```
}
```

```
void ITEMS :: displaySum(void)
```

```

{
    float sum = 0;
    for(int i=0;i<count;i++)
        sum = sum + itemPrice[i];
    cout<<"\nTotal value: "<<sum<<endl;
}

void ITEMS :: remove(void)    //Delete a specific item
{
    int a;
    cout<<"Enter item Code: ";
    cin>>a;
    for(int i=0;i<count;i++)
        if(itemCode[i] == a)
            itemPrice[i] = 0;
}

void ITEMS :: displayItems(void) //displaying items
{
    cout<<"\nCode\tPrice\n";
    for(int i=0;i<count;i++)
    {
        cout<<itemCode[i]<<"\t"<<itemPrice[i]<<"\n";
    }
    cout<<"\n";
}

//Driver Program
int main()
{
    ITEMS order;

```

```

order.CNT();

int x;

do    //do....while loop
{
    cout<<"\nYou can do the following : "<<"Enter appropriate number \n";
    cout<<"\n1. Add an item ";
    cout<<"\n2. Display total value ";
    cout<<"\n3. Delete an item ";
    cout<<"\n4. Display all item ";
    cout<<"\n5. Quit ";
    cout<<"\nWhat is your Options: ";
    cin>>x;

    switch(x)
    {
        case 1:
            order.getitem();
            break;

        case 2:
            order.displaySum();
            break;

        case 3:
            order.remove();
            break;

        case 4:
            order.displayItems();
            break;

        case 5:
            break;

        default :
            cout<<"Error in input; try again\n";
    }
}

```

```
        }  
    }  
    while(x != 5);    //do...while ends  
  
    return 0;  
}
```

You can do the following : Enter appropriate number

1. Add an item
2. Display total value
3. Delete an item
4. Display all item
5. Quit

What is your Options: 1

Enter Item Code: 1

Enter Item Cost: 100

You can do the following : Enter appropriate number

1. Add an item
2. Display total value
3. Delete an item
4. Display all item
5. Quit

What is your Options: 2

Total value: 100