

## **Practical-1**

**Aim: WAP to create a class to read and add two distance. (e.g. 8 feet 16 inch + 4 feet 14 inch = 14 feet 6 inch)**

### **Program:**

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

class Distance
{
    public:
    int feet;
    float inch;
};

int main()
{
    Distance d1, d2, d3;

    cout << "Enter 1st distance: "<<endl<<endl;
    cout << "Enter feet: ";
    cin >> d1.feet;
    cout << "Enter inch: ";
    cin >> d1.inch;

    cout << "-----"<<endl;
    cout << "Enter 2nd distance: "<<endl<<endl;
    cout << "Enter feet: ";
    cin >> d2.feet;
    cout << "Enter inch: ";
    cin >> d2.inch;

    cout <<endl<< "-----"<<endl;

    d3.feet = d1.feet + d2.feet;
    d3.inch = d1.inch + d2.inch;
```

```
if (d3.inch > 12)
```

```
{
```

```
    int extra = d3.inch /12;
```

```
    d3.feet = d3.feet + extra;
```

```
    d3.inch = d3.inch -(extra*12);
```

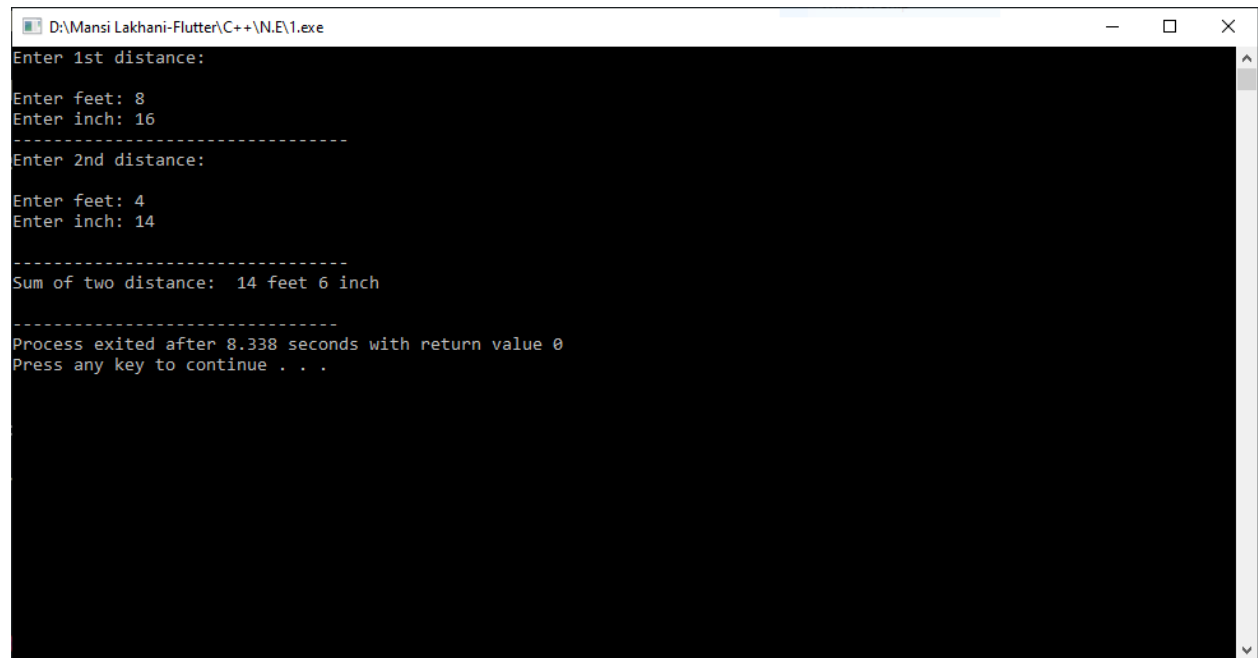
```
}
```

```
cout << "Sum of two distance: "<<d3.feet <<" feet " <<d3.inch <<" inch "<<endl;
```

```
return 0;
```

```
}
```

## Output:



```
D:\Mansi Lakhani-Flutter\C++\N.E\1.exe
Enter 1st distance:
Enter feet: 8
Enter inch: 16
-----
Enter 2nd distance:
Enter feet: 4
Enter inch: 14
-----
Sum of two distance:  14 feet 6 inch
-----
Process exited after 8.338 seconds with return value 0
Press any key to continue . . .
```

## **Practical-2**

**Aim:** WAP to create a class to read and add two times.

### **Program:**

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

class Time
{
    public:
        int hour;
        int minute;
        int second;
};

int main()
{
    Time t1,t2,t3;

    cout << "-----Time-1-----"<<endl;
    cout << "Enter hour: ";
    cin >> t1.hour;
    cout << "Enter minute: ";
    cin >> t1.minute;
    cout << "Enter second: ";
    cin >> t1.second;

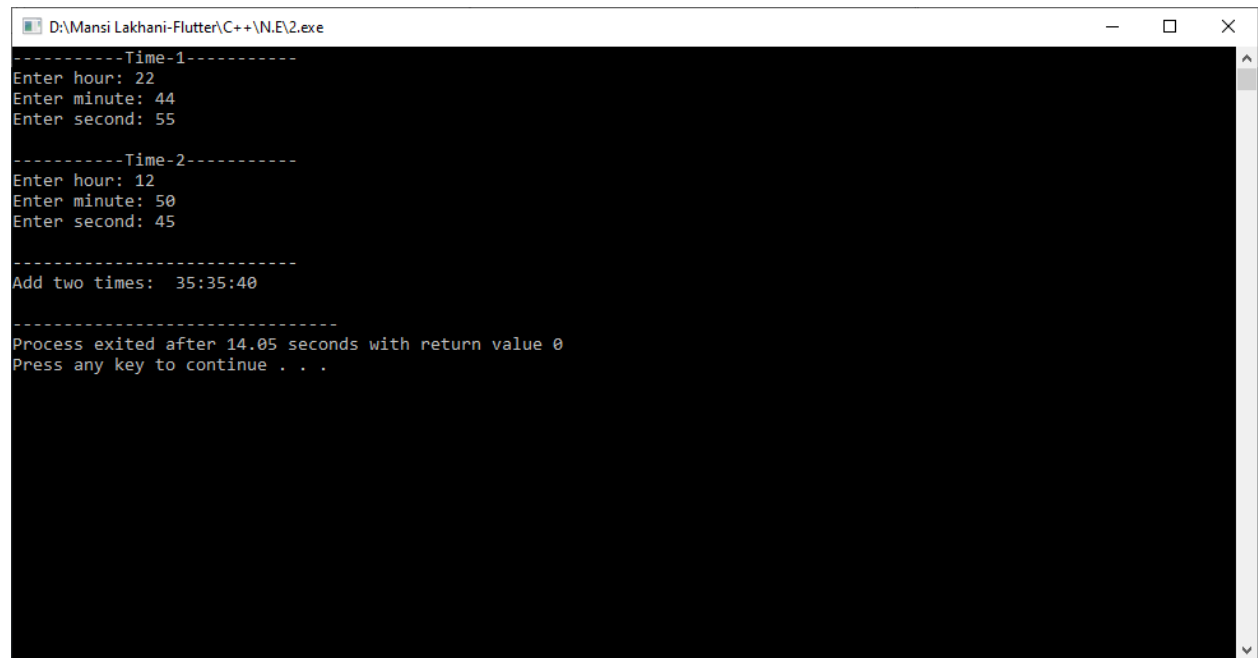
    cout << endl<<"-----Time-2-----"<<endl;
    cout << "Enter hour: ";
    cin >> t2.hour;
    cout << "Enter minute: ";
    cin >> t2.minute;
    cout << "Enter second: ";
    cin >> t2.second;

    cout << endl<<"-----"<<endl;
```

```
t3.second = t1.second + t2.second;
t3.minute = t1.minute + t2.minute + (t3.second/60);
t3.hour = t1.hour + t2.hour + (t3.minute/60);
t3.second = t3.second % 60;
t3.minute = t3.minute % 60;

cout << "Add two times: " << t3.hour << ":" << t3.minute << ":" << t3.second << endl;
    return 0;
}
```

## Output:



```
D:\Mansi Lakhani-Flutter\C++\N.E\2.exe
-----Time-1-----
Enter hour: 22
Enter minute: 44
Enter second: 55

-----Time-2-----
Enter hour: 12
Enter minute: 50
Enter second: 45

-----
Add two times: 35:35:40

-----
Process exited after 14.05 seconds with return value 0
Press any key to continue . . .
```

### **Practical-3**

**Aim:** WAP to create class to read time in seconds and convert into time in (HH:MM:SS) format.

**Program:**

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

class Time
{
    public:
    int hours;
    int minutes;
    int second;
};

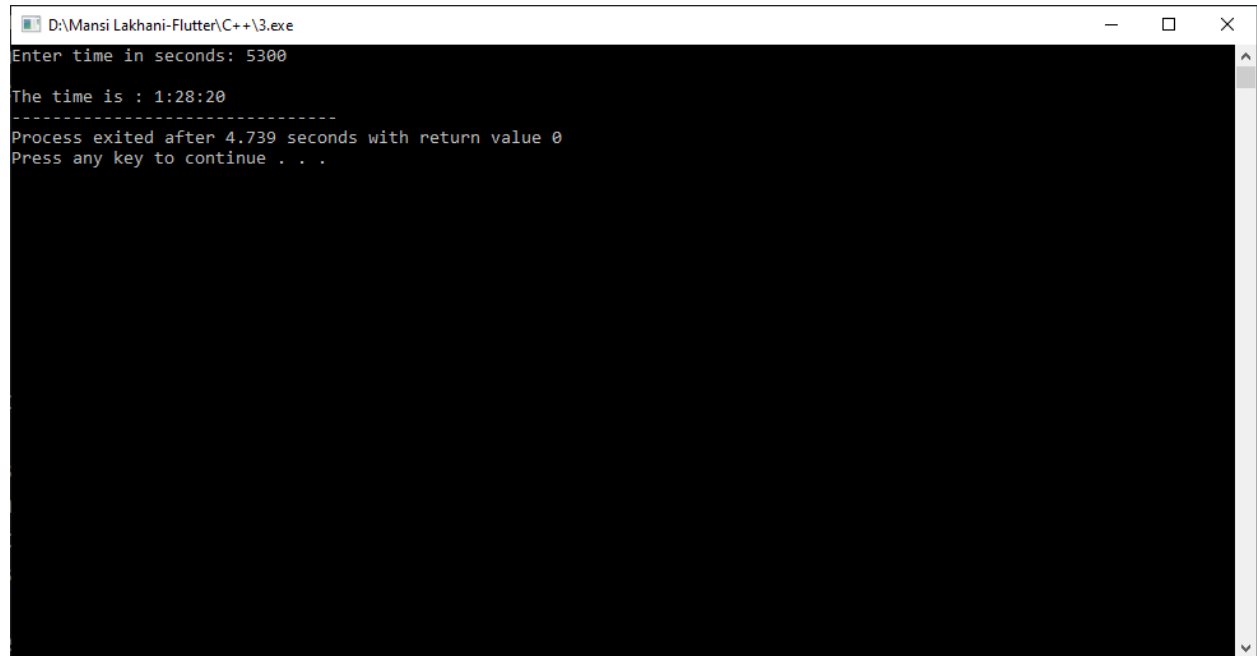
int main()
{
    int s;
    Time t1;

    cout << "Enter time in seconds: ";
    cin >> t1.second;

    t1.hours=t1.second/3600;
    t1.second=t1.second%3600;
    t1.minutes=t1.second/60;
    s = t1.second % 60;

    cout <<endl<<"The time is : "<<t1.hours <<":" <<  t1.minutes << ":" <<s ;
    return 0;
}
```

## Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C++\3.exe" and includes standard minimize, maximize, and close buttons. The command prompt has a black background with white text. The output displayed is as follows:

```
Enter time in seconds: 5300  
  
The time is : 1:28:20  
-----  
Process exited after 4.739 seconds with return value 0  
Press any key to continue . . .
```



## **Practical-4**

**Aim:** WAP to create a class which Read and Print House details along with Room details.

### **Program:**

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

class House
{
    public:
        int house_number;
        int room;
        int hall;
        int kitchen;
};

class Room
{
    public:
        int length;
        int breath;
        int cupboard;
};

int main()
{
    House h1;
    Room r1;

    cout << "Enter your house number : ";    cin >> h1.house_number;
    cout << "How many room in your house : ";    cin >> h1.room;
    cout << "How many hall in your house : ";    cin >> h1.hall;
    cout << "How many kitchen in your house : ";    cin >> h1.kitchen;
```

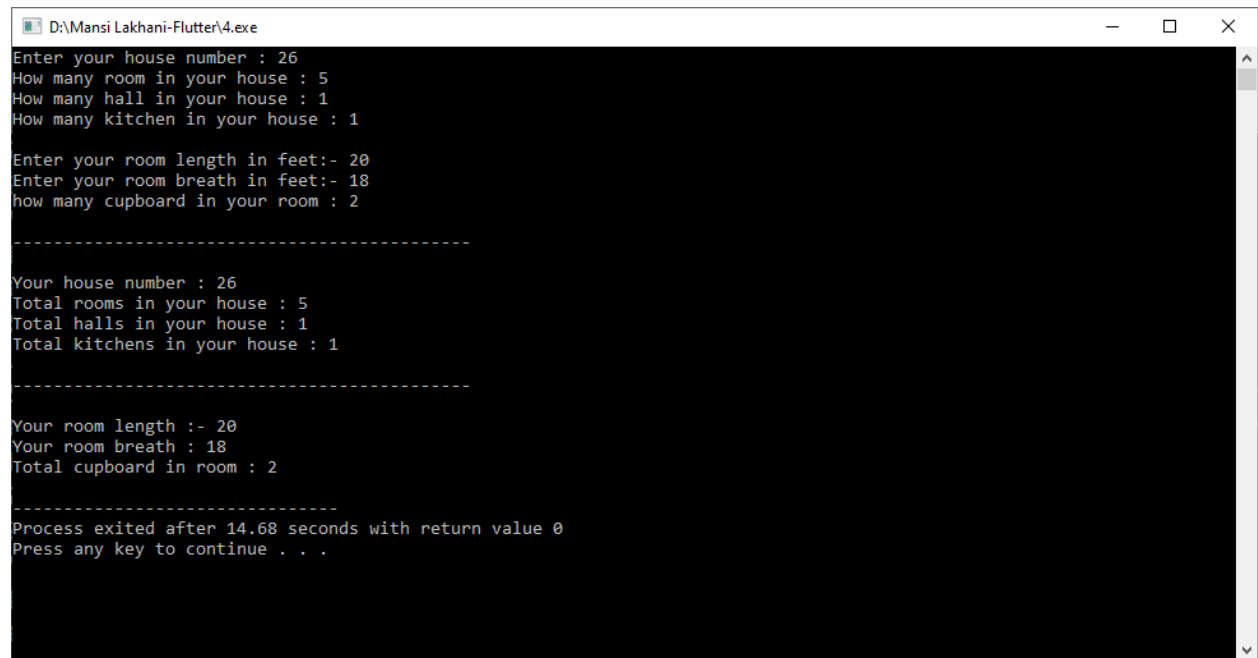
```
cout << endl << "Enter your room length in feet:- "; cin >> r1.length;
cout << "Enter your room breath in feet:- "; cin >> r1.breath;
cout << "how many cupboard in your room : "; cin >> r1.cupboard;
```

```
cout << endl << "-----" << endl;
cout << endl << "Your house number : " << h1.house_number << endl;
cout << "Total rooms in your house : " << h1.room << endl;
cout << "Total halls in your house : " << h1.hall << endl;
cout << "Total kitchens in your house : " << h1.kitchen << endl;
```

```
cout << endl << "-----" << endl;
cout << endl << "Your room length :- " << r1.length << endl;
cout << "Your room breath : " << r1.breath << endl;
cout << "Total cupboard in room : " << r1.cupboard << endl;
return 0;
```

```
}
```

## Output:



```
D:\Mansi Lakhani-Flutter\4.exe
Enter your house number : 26
How many room in your house : 5
How many hall in your house : 1
How many kitchen in your house : 1

Enter your room length in feet:- 20
Enter your room breath in feet:- 18
how many cupboard in your room : 2

-----

Your house number : 26
Total rooms in your house : 5
Total halls in your house : 1
Total kitchens in your house : 1

-----

Your room length :- 20
Your room breath : 18
Total cupboard in room : 2

-----

Process exited after 14.68 seconds with return value 0
Press any key to continue . . .
```

## **Practical-5**

**Aim:** WAP which illustrates the use of public and private access modifiers.

### **Program:**

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

class Restaurant
{
    private:
        int starter;
        int desserts;
        int soft_drinks;
};

class Cafe
{
    public:
        int hot_coffee;
        int black_coffee;
        int cold_bar;
};

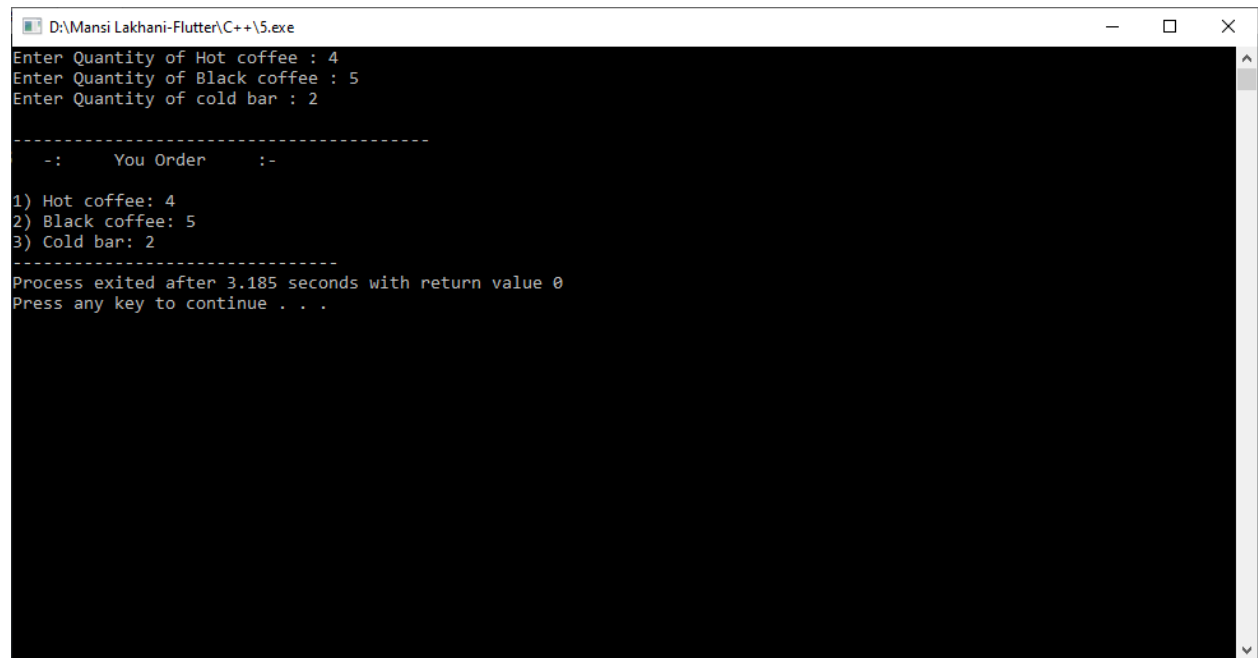
int main()
{
    Cafe c;

    cout << "Enter Quantity of Hot coffee : ";    cin >> c.hot_coffee;
    cout << "Enter Quantity of Black coffee : ";    cin >> c.black_coffee;
    cout << "Enter Quantity of cold bar : ";    cin >> c.cold_bar;

    cout << endl << "-----" << endl;
    cout << "  -:   You Order   :- " << endl << endl << "1) Hot coffee: " << c.hot_coffee << endl
    << "2) Black coffee: " << c.black_coffee << endl << "3) Cold bar: " << c.cold_bar;
```

```
    return 0;  
}
```

## Output:



```
D:\Mansi Lakhani-Flutter\C++\5.exe
Enter Quantity of Hot coffee : 4
Enter Quantity of Black coffee : 5
Enter Quantity of cold bar : 2

-----
-:      You Order      :-
1) Hot coffee: 4
2) Black coffee: 5
3) Cold bar: 2
-----
Process exited after 3.185 seconds with return value 0
Press any key to continue . . .
```