TASK – 01

1.Write the declaration of function to overload == operator for a class Distance with members feet and inches.

bool operator == (Distance other);

2. Write the declaration of the function in part 1 above if it is implemented as a non-member function.

bool Distance::operator==(Distance other);

3. Can we overload the '<' operator for integers?

No, we cannot overload a pre-defined function.

4. Using operator overloading can we change the number of operands of an operator?

No, we cannot change the number of operands of an operator.

5. Assume that '+' is overload for class Distance. Can we write the following statement.

Distance d1, d2(3,4), d3(4,5), d4(6,7);

d1 = d2 + d3 + d4;

Yes, we can write this. Function will be called by d1, and d2, d3, d4 will be passed as arguments.

TASK – 02

Create a class Integer to simulate the integer data type in C++. The class will have one integer data member. Provide constructors and get()/set () methods. Overload the following relational operators.

<, >, ==, !=, +, - ,*

Overload each of these using class member function .and verify the results

CODE:

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

class Integer{

int i;

public:

Integer(){
i=0;
}

Integer(int in){
i=in;
}

void set(int in){
i=in;
}

int get(){
return i;
}

Integer operator-(Integer i2){
int result=i-i2.i;
return Integer(result);
}
```

```
Integer operator+(Integer i2){
int result = i+i2.i;
return Integer(result);
}


Integer operator*(Integer i2){
int result=i*i2.i;
return Integer(result);
}

bool operator<(Integer i2){
if(i < i2.i)
{
return true;
}
else
return false;
}

bool operator>(Integer i2){
if(i > i2.i)
{
return true;
}
else
return false;
}

bool operator!=(Integer i2){
if(i != i2.i)
{
return true;
}
else
return false;
}

bool operator==(Integer i2){
if(i == i2.i)
{
return true;
}
else
return false;
}
```

```
};


int main() {

Integer i1(5),i2(2),a,b,c;
bool d,e,f,g;
a=i1+i2;
b=i1-i2;
c=i1*i2;
d=i1!=i2;
e=i1<i2;
f=i1>i2;
g=i1==i2;

cout <<"a+b = " <<a.get() << endl;
cout <<"a-b = " << b.get() << endl;
cout <<"a*b = " << c.get() << endl;
cout<<"NOTE: For boolean values, 1 means true and 0 means false\n";
cout <<"a!=b = " << d << endl;
cout <<"a<b = " << e << endl;
cout <<"a>b = " << f << endl;
cout <<"a==b = " << g << endl;

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return 0;
}
```

OUTPUT:

```
a+b = 7
a-b = 3
a*b = 10
NOTE: For boolean values, 1 means true and 0 means false
a!=b = 1
a<b = 0
a>b = 1
a==b = 0

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```