

TEMPLATE FUNCTION WITH SINGLE PARAMETER:

INPUT:

```
#include<iostream>

using namespace std;

template<typename T>
T add(T num1,T num2, T num3)
{
    return(num1+num2+num3);
}

template<typename T1>
T1 sub(T1 num1,T1 num2, T1 num3)
{
    return(num1-num2-num3);
}

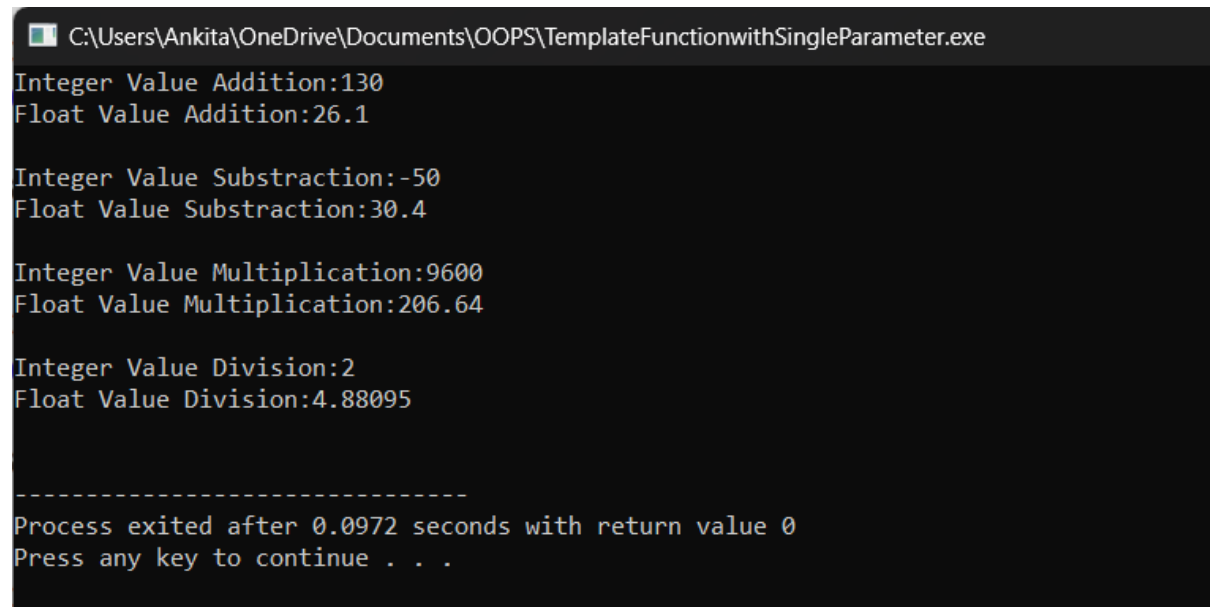
template<typename T2>
T2 mul(T2 num1,T2 num2, T2 num3)
{
    return(num1*num2*num3);
}

template<typename T3>
T3 div(T3 num1,T3 num2)
{
    return(num1/num2);
}

int main()
```

```
{  
    int add1,sub1,mul1,div1;  
    double add2,sub2,mul2,div2;  
  
    add1=add<int>(40,80,10);  
    cout<<"Integer Value Addition:"<<add1<<endl;  
  
    add2=add<float>(20.5,4.2,1.4);  
    cout<<"Float Value Addition:"<<add2<<endl<<endl;  
  
    sub1=sub<int>(40,80,10);  
    cout<<"Integer Value Substraction:"<<sub1<<endl;  
  
    sub2=sub<float>(50.6,18.7,1.5);  
    cout<<"Float Value Substraction:"<<sub2<<endl<<endl;  
  
    mul1=mul<int>(40,80,3);  
    cout<<"Integer Value Multiplication:"<<mul1<<endl;  
  
    mul2=mul<float>(20.5,4.2,2.4);  
    cout<<"Float Value Multiplication:"<<mul2<<endl<<endl;  
  
    div1=div<int>(40,20);  
    cout<<"Integer Value Division:"<<div1<<endl;  
  
    div2=div<float>(20.5,4.2);  
    cout<<"Float Value Division:"<<div2<<endl<<endl;  
    return 0;  
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\OOPS\TemplateFunctionwithSingleParameter.exe
Integer Value Addition:130
Float Value Addition:26.1

Integer Value Substraction:-50
Float Value Substraction:30.4

Integer Value Multiplication:9600
Float Value Multiplication:206.64

Integer Value Division:2
Float Value Division:4.88095

-----
Process exited after 0.0972 seconds with return value 0
Press any key to continue . . .
```

TEMPLATE FUNCTION WITH MULTIPLE PARAMETER:

INPUT:

```
#include<iostream>

using namespace std;

template<typename T1,typename T2>
T1 add(T1 num1,T2 num2)
{
    return(num1+num2);
}

template<typename s1,typename s2>
s1 sub(s1 num1,s2 num2)
{
    return(num1-num2);
}
```

```
template<typename m1,typename m2>
m1 mul(m1 num1,m2 num2)
{
    return(num1*num2);
}
```

```
template<typename d1,typename d2>
d1 div(d1 num1,d2 num2)
{
    return(num1/num2);
}
```

```
int main()
{
    int add1,sub1,mul1,div1;
    double add2,sub2,mul2,div2;

    add1=add<int,int>(30,20);
    cout<<"Integer Value Addition:"<<add1<<endl;

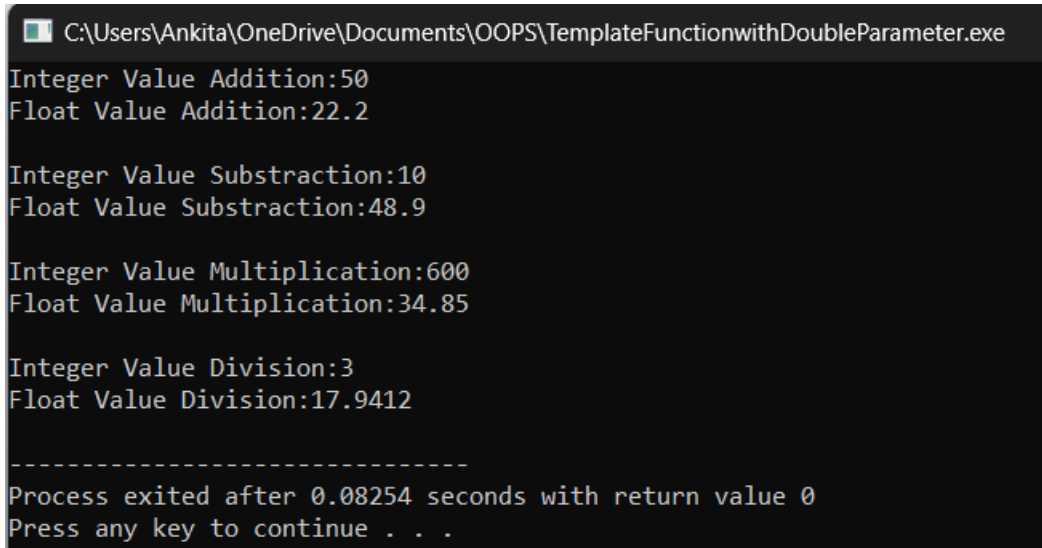
    add2=add<float,float>(20.5,1.7);
    cout<<"Float Value Addition:"<<add2<<endl<<endl;

    sub1=sub<int,int>(30,20);
    cout<<"Integer Value Substraction:"<<sub1<<endl;

    sub2=sub<float,float>(50.6,1.7);
    cout<<"Float Value Substraction:"<<sub2<<endl<<endl;
```

```
mul1=mul<int,int>(30,20);  
cout<<"Integer Value Multiplication:"<<mul1<<endl;  
  
mul2=mul<float,float>(20.5,1.7);  
cout<<"Float Value Multiplication:"<<mul2<<endl<<endl;  
  
div1=div<int,int>(90,30);  
cout<<"Integer Value Division:"<<div1<<endl;  
  
div2=div<float,float>(30.5,1.7);  
cout<<"Float Value Division:"<<div2<<endl;  
  
return 0;  
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\OOPS\TemplateFunctionwithDoubleParameter.exe  
Integer Value Addition:50  
Float Value Addition:22.2  
  
Integer Value Substraction:10  
Float Value Substraction:48.9  
  
Integer Value Multiplication:600  
Float Value Multiplication:34.85  
  
Integer Value Division:3  
Float Value Division:17.9412  
  
-----  
Process exited after 0.08254 seconds with return value 0  
Press any key to continue . . .
```

TEMPLATE CLASS WITH SINGLE PARAMETER

INPUT:

```
#include<iostream>

using namespace std;

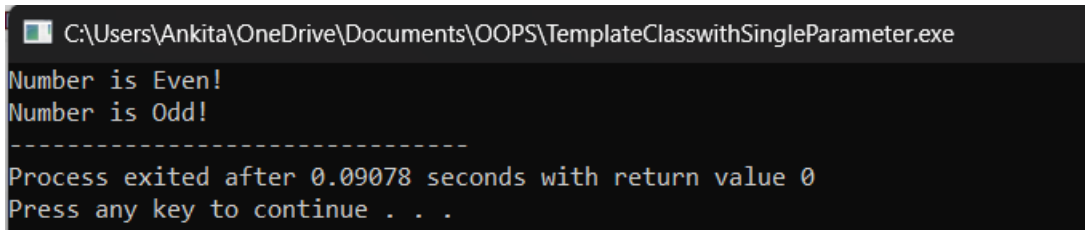
template <class T>
class demo{
    private:
        T num;
    public:
        demo(T n1)
        {
            num=n1;
        }

        void check()
        {
            if(num%2==0)
            {
                cout<<"Number is Even!";
            }
            else
            {
                cout<<"Number is Odd!";
            }
        }
};

int main()
{
```

```
demo<int>obj1(6);  
obj1.check();  
cout<<endl;  
demo<int>obj2(19);  
obj2.check();  
return 0;  
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\OOPS\TemplateClasswithSingleParameter.exe  
Number is Even!  
Number is Odd!  
-----  
Process exited after 0.09078 seconds with return value 0  
Press any key to continue . . .
```

TEMPLATE CLASS WITH MULTIPLE PARAMETER:

INPUT:

```
#include<iostream>  
using namespace std;  
template<class T1, class T2>  
class demo{  
    private:  
        T1 num1;  
        T2 num2;  
    public:  
        demo(T1 length, T2 breadth)  
        {  
            num1=length;
```

```

        num2=breathth;

    }

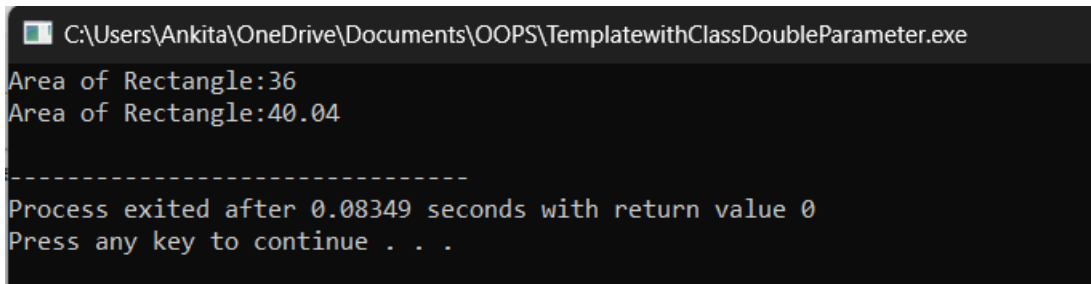
    void area()
    {
        cout<<"Area of Rectangle:"<<(num1*num2)<<endl;
    }
};

int main()
{
    demo<int, int>obj1(9,4);
    obj1.area();
    demo<float, float>obj2(5.2,7.7);
    obj2.area();
    return 0;

}

```

OUTPUT:



```

C:\Users\Ankita\OneDrive\Documents\OOPS\TemplatewithClassDoubleParameter.exe
Area of Rectangle:36
Area of Rectangle:40.04
-----
Process exited after 0.08349 seconds with return value 0
Press any key to continue . . .

```