

STRING CONCATENATION:

INPUT:

```
#include<iostream>
#include<string>
using namespace std;
class Mystring{
    string str;
    public:
        void input(){
            cout<<"Enter String: ";
            cin>>str;
        }
        void display()
        {
            cout<<"Concatenated String: "<<str<<endl;
        }
        Mystring operator+(Mystring obj)
        {
            Mystring temp;
            temp.str = str + obj.str;
            return temp;
        }
};
int main()
{
    Mystring s1,s2,s3;
    s1.input();
    s2.input();

    s3 = s1 + s2;
    s3.display();

    return 0;
}
```

OUTPUT:

```
C:\Users\Ankita\OneDrive\Documents\DSA\String(overloading).exe
Enter String: Ankita
Enter String: Nadarge
Concatenated String: AnkitaNadarge

-----
Process exited after 8.218 seconds with return value 0
Press any key to continue . . .
```

MATRIX ADDITION

INPUT:

```
#include<iostream>
using namespace std;
class matrix12
{
    int a[2][2],i,j;
    public:
        void getdata();
        void showdata();
        void operator +(matrix12 obj);
};
void matrix12::getdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
```

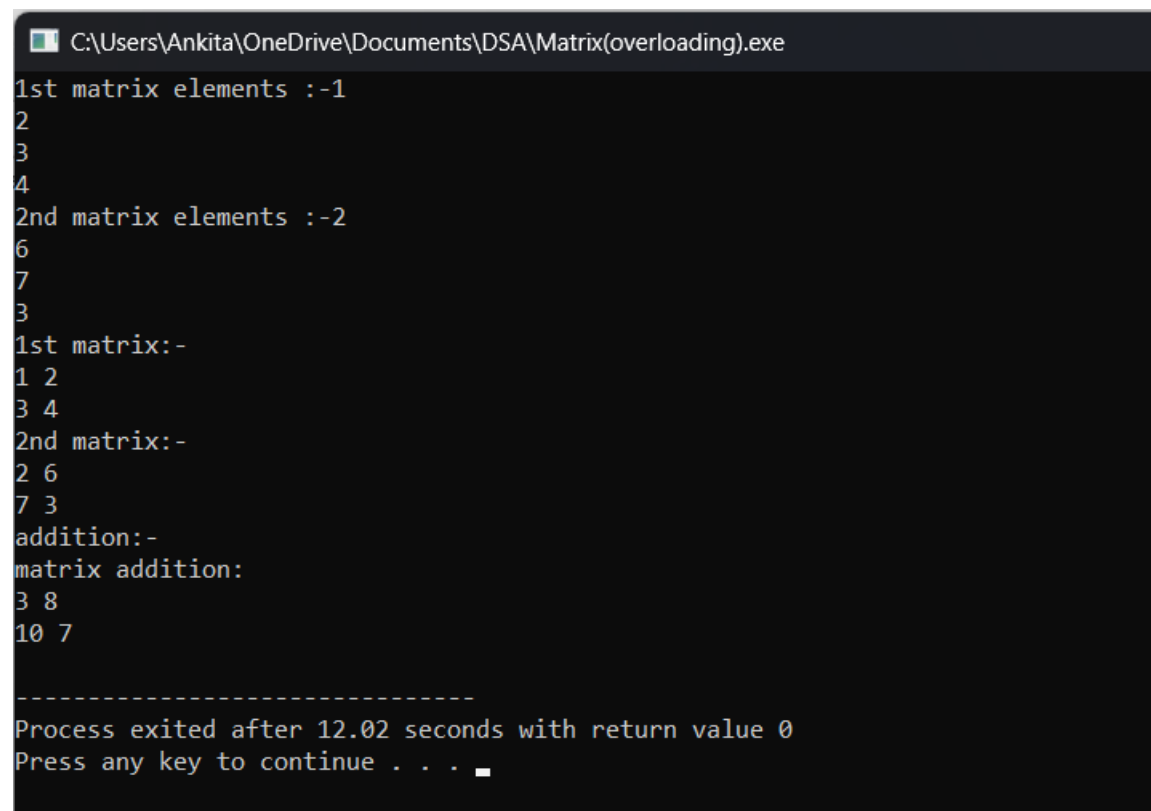
```

        {
            cin>>a[i][j];
        }
    }
}
void matrix12::showdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<a[i][j]<<ends;
        }
        cout<<"\n";
    }
}
void matrix12::operator + (matrix12 obj)
{
    int b[2][2];
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            b[i][j]=a[i][j]+obj.a[i][j];
        }
    }
    cout<<"matrix addition:"<<endl;
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<b[i][j]<<ends;
        }
        cout<<"\n";
    }
}
int main()
{
    matrix12 ob1,ob2;
    cout<<"1st matrix elements :-";
    ob1.getdata();
    cout<<"2nd matrix elements :-";
    ob2.getdata();
    cout<<"1st matrix:-"<<endl;

```

```
ob1.showdata();  
cout<<"2nd matrix:-"<<endl;  
ob2.showdata();  
cout<<"addition:-"<<endl;  
ob1+ob2;  
return 0;  
}
```

OUTPUT:



The screenshot shows a Windows command prompt window with the title bar "C:\Users\Ankita\OneDrive\Documents\DSA\Matrix(overloading).exe". The program's output is as follows:

```
1st matrix elements :-1  
2  
3  
4  
2nd matrix elements :-2  
6  
7  
3  
1st matrix:-  
1 2  
3 4  
2nd matrix:-  
2 6  
7 3  
addition:-  
matrix addition:  
3 8  
10 7  
  
-----  
Process exited after 12.02 seconds with return value 0  
Press any key to continue . . .
```

STRING CONCATENATION:

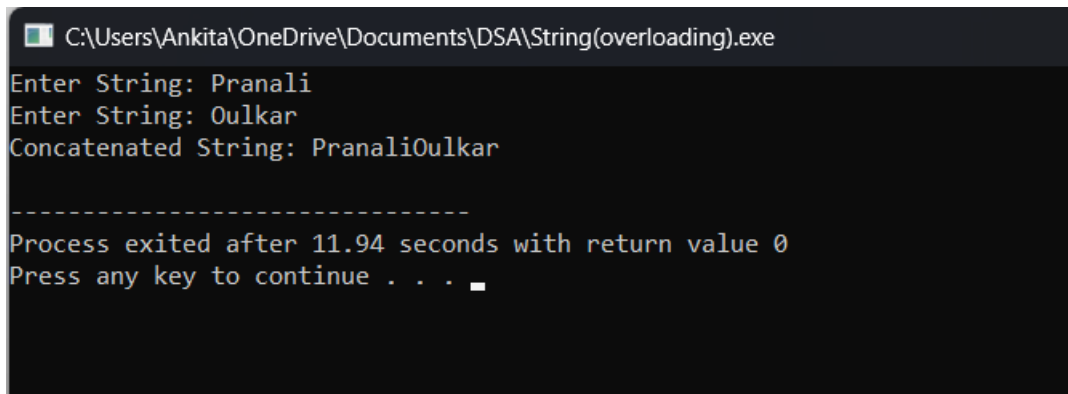
INPUT:

```
#include<iostream>
#include<string>
using namespace std;
class Mystring{
    string str;
    public:
        void input(){
            cout<<"Enter String: ";
            cin>>str;
        }
        void display()
        {
            cout<<"Concatenated String: "<<str<<endl;
        }
        Mystring operator+(Mystring obj)
        {
            Mystring temp;
            temp.str = str + obj.str;
            return temp;
        }
};
int main()
{
    Mystring s1,s2,s3;
    s1.input();
    s2.input();

    s3 = s1 + s2;
    s3.display();

    return 0;
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\DSA\String(overloading).exe
Enter String: Pranali
Enter String: Oulkar
Concatenated String: PranaliOulkar

-----
Process exited after 11.94 seconds with return value 0
Press any key to continue . . .
```

MATRIX ADDITION

INPUT:

```
#include<iostream>
using namespace std;
class matrix12
{
    int a[2][2],i,j;
    public:
        void getdata();
        void showdata();
        void operator +(matrix12 obj);
};
void matrix12::getdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cin>>a[i][j];
        }
    }
}
```


```

    }
}
}
void matrix12::showdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<a[i][j]<<ends;
        }
        cout<<"\n";
    }
}
void matrix12::operator + (matrix12 obj)
{
    int b[2][2];
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            b[i][j]=a[i][j]+obj.a[i][j];
        }
    }
    cout<<"matrix addition:"<<endl;
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<b[i][j]<<ends;
        }
        cout<<"\n";
    }
}
int main()
{
    matrix12 ob1,ob2;
    cout<<"1st matrix elements :-";
    ob1.getdata();
    cout<<"2nd matrix elements :-";
    ob2.getdata();
    cout<<"1st matrix:-"<<endl;
    ob1.showdata();
    cout<<"2nd matrix:-"<<endl;
}

```

```
ob2.showdata();  
cout<<"addition:-"<<endl;  
ob1+ob2;  
return 0;  
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\DSA\Matrix(overloading).exe  
1st matrix elements :-1  
2  
3  
4  
2nd matrix elements :-2  
6  
7  
3  
1st matrix:-  
1 2  
3 4  
2nd matrix:-  
2 6  
7 3  
addition:-  
matrix addition:  
3 8  
10 7  
  
-----  
Process exited after 12.02 seconds with return value 0  
Press any key to continue . . .
```


STRING CONCATENATION:

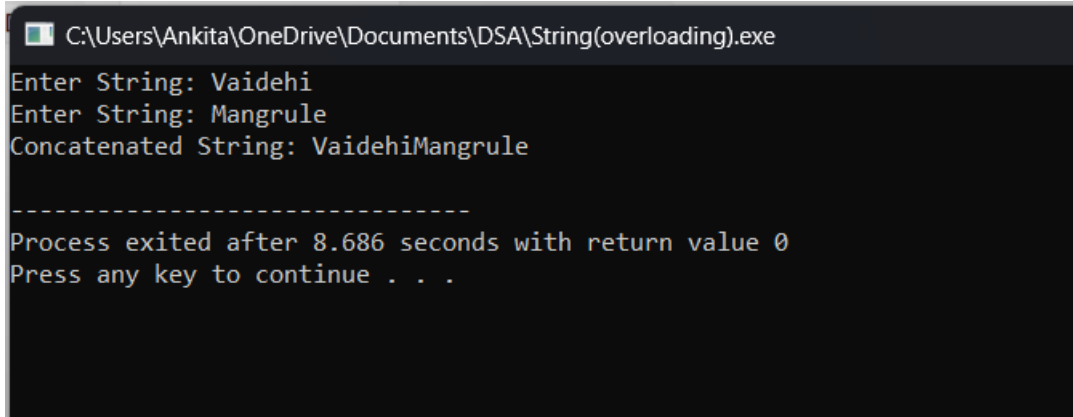
INPUT:

```
#include<iostream>
#include<string>
using namespace std;
class Mystring{
    string str;
    public:
        void input(){
            cout<<"Enter String: ";
            cin>>str;
        }
        void display()
        {
            cout<<"Concatenated String: "<<str<<endl;
        }
        Mystring operator+(Mystring obj)
        {
            Mystring temp;
            temp.str = str + obj.str;
            return temp;
        }
};
int main()
{
    Mystring s1,s2,s3;
    s1.input();
    s2.input();

    s3 = s1 + s2;
    s3.display();

    return 0;
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\DSA\String(overloading).exe
Enter String: Vaidehi
Enter String: Mangrule
Concatenated String: VaidehiMangrule

-----
Process exited after 8.686 seconds with return value 0
Press any key to continue . . .
```

MATRIX ADDITION

INPUT:

```
#include<iostream>
using namespace std;
class matrix12
{
    int a[2][2],i,j;
    public:
        void getdata();
        void showdata();
        void operator +(matrix12 obj);
};
void matrix12::getdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
```

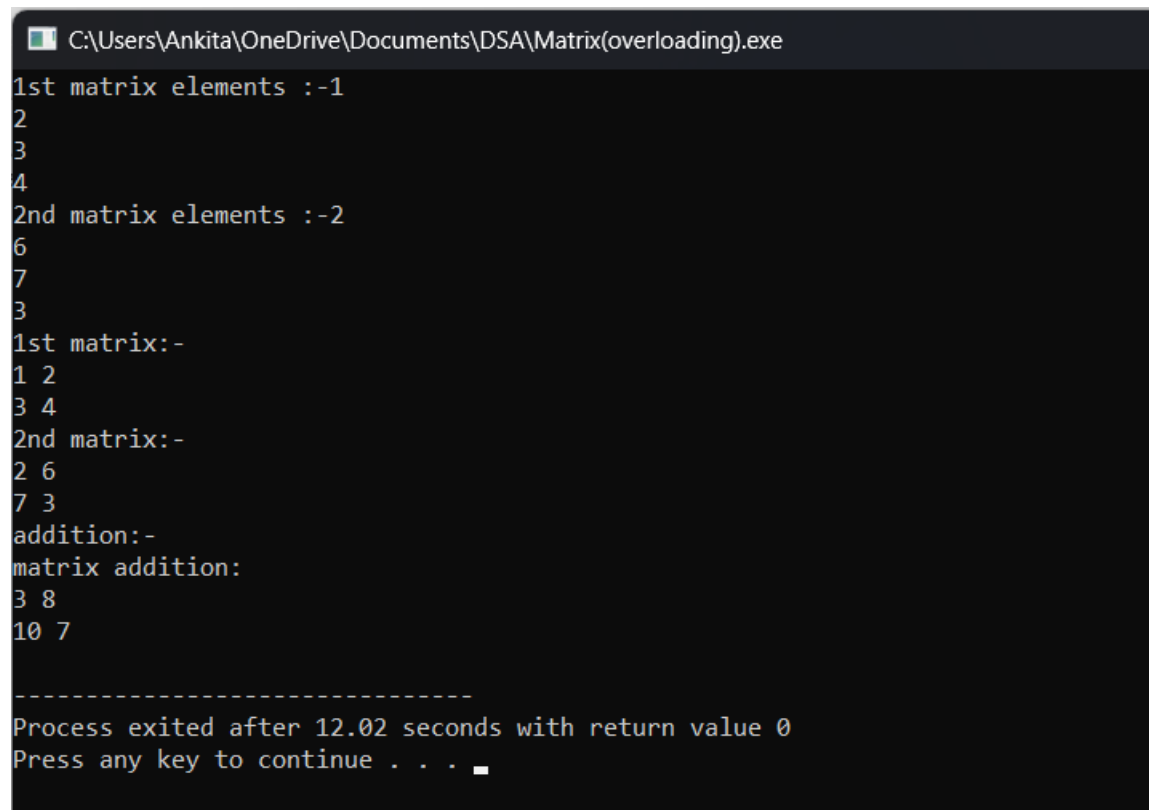
```

        cin>>a[i][j];
    }
}
void matrix12::showdata()
{
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<a[i][j]<<ends;
        }
        cout<<"\n";
    }
}
void matrix12::operator + (matrix12 obj)
{
    int b[2][2];
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            b[i][j]=a[i][j]+obj.a[i][j];
        }
    }
    cout<<"matrix addition:"<<endl;
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            cout<<b[i][j]<<ends;
        }
        cout<<"\n";
    }
}
int main()
{
    matrix12 ob1,ob2;
    cout<<"1st matrix elements :-";
    ob1.getdata();
    cout<<"2nd matrix elements :-";
    ob2.getdata();
    cout<<"1st matrix:-"<<endl;
    ob1.showdata();

```

```
    cout<<"2nd matrix:-"<<endl;
    ob2.showdata();
    cout<<"addition:-"<<endl;
    ob1+ob2;
    return 0;
}
```

OUTPUT:



```
C:\Users\Ankita\OneDrive\Documents\DSA\Matrix(overloading).exe
1st matrix elements :-1
2
3
4
2nd matrix elements :-2
6
7
3
1st matrix:-
1 2
3 4
2nd matrix:-
2 6
7 3
addition:-
matrix addition:
3 8
10 7

-----
Process exited after 12.02 seconds with return value 0
Press any key to continue . . .
```