

## Add Strings in C++

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

string addStrings(string num1,
string num2) {
    string res = "";

    int i = num1.length() - 1;
    int j = num2.length() - 1;
    int carry = 0;

    while (i >= 0 || j >= 0 || carry
!= 0) {
        int ival = i >= 0 ? num1[i] -
'0' : 0;
        int jval = j >= 0 ? num2[j] -
'0' : 0;

        int sum = ival + jval + carry;
        res = to_string(sum % 10) +
res;
        carry = sum / 10;

        i--;
        j--;
    }

    return res;
}

int main() {
    string n1 = "123";
    string n2 = "23";
    string res = addStrings(n1,
n2);
    cout << res << endl; // Output
should be 146

    return 0;
}
```

### Input:

```
n1 = "123"
n2 = "23"
```

### 🔄 Dry Run Table:

Step	i	j	num1[i]	num2[j]	ival	jval	carry (before)	sum = ival + jval + carry	res	carry (after)
1	2	1	'3'	'3'	3	3	0	6	"6"	0
2	1	0	'2'	'2'	2	2	0	4	"46"	0
3	0	-1	'1'	-	1	0	0	1	"146"	0

### ✓ Final Output:

```
"146"
```