

### Difference of every two consecutive character in C++

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

string solution(string str) {
    if (str.empty()) return "";

    string result;
    result += str[0]; // Append
the first character directly
    for (int i = 1; i <
str.length(); i++) {
        char curr = str[i];
        char prev = str[i - 1];
        int gap = curr - prev;

        result += to_string(gap);
// Append the difference as a
string
        result += curr; //
Append the current
character
    }

    return result;
}

int main() {
    string str = "pepCODinG";
    cout << solution(str) <<
endl;
    return 0;
}
```

**Input String: "pepCODinG"**

Index (i)	prev	curr	ASCII(prev)	ASCII(curr)	Difference curr - prev	Intermediate Result
0	—	p	—	112	—	p
1	p	e	112	101	-11	p-11e
2	e	p	101	112	11	p-11e11p
3	p	C	112	67	-45	p-11e11p-45C
4	C	O	67	79	12	p-11e11p-45C12O
5	O	D	79	68	-11	p-11e11p-45C12O-11D
6	D	i	68	105	37	p-11e11p-45C12O-11D37i
7	i	n	105	110	5	p-11e11p-45C12O-11D37i5n
8	n	G	110	71	-39	p-11e11p-45C12O-11D37i5n-39G

✔ **Final Output:**

p-11e11p-45C12O-11D37i5n-39G

p-11e11p-45C12O-11D37i5n-39G