Eli Griffiths and Hang Tu
Checked by groups 6 and 7

String Worksheet

1. Consider the following C++ code:

```
string str1;
string str2;
char ch;
int index;
cin >> str1;
cin >> str2;
cin >> index;
ch = str1[index];
str1[index] = str2[index];
str2[index] = ch;
cout << str1 << " " << str2 << endl;
```

Answer the following questions:

a. What is the output if the input is Hello There 2?

Heelo Thlre

b. What is the output if the input is Diamond Gold 0?

Giamond Dold

c. What is the output if the input is C++ Java 1?

Ca+ J+va

2. Suppose that you have the following statements:

```
string str1, str2;
cin >> str1 >> str2;
if (str1 == str2)
    cout << str1 + '!' << endl;
else if (str1 > str2)
    cout << str1 + " > " + str2 << endl;
else
    cout << str1 + " < " + str2 << endl;
```

Answer the following questions:

a. What is the output if the input is Programming Project?

Programming < Project

b. What is the output if the input is Summer Trip?

Summer < Trip

c. What is the output if the input is Winter Cold?

```
Winter > Cold
```

3. What is the output of the following program?

```
#include <iostream>
#include <string>
using namespace std;
int main()
{
    string str1 = "Trip to Hawaii";
    string str2 = "Summer or Fall";
    string newStr;
    newStr = str2 + ' ' + str1;


    cout << newStr << endl;
    cout << str1 + " in " + str2 << endl;
    cout << newStr.length() << endl;
    cout << str1.find('H') << endl;
    cout << str2.find("or") << endl;
    cout << newStr.substr(10, 19) << endl;
    cout << newStr.replace(23, 6, "******") << endl;
    string str = "C++ Programming";
    cout << str << endl;
    cout << str.length() << endl;
    str[0] = 'J';
    str[2] = '$';
    cout << str << endl;
    return 0;
}
```

```
Summer or Fall Trip to Hawaii
Trip to Hawaii in Summer or Fall
29
8
7
Fall Trip to Hawaii
Summer or Fall Trip to ******
C++ Programming
15
J+$ Programming
```

4. Consider the following statement:

```
string str = "Now is the time for the party!";
```

What is the output of the following statements? (Assume that all parts are independent of each other.)

a.
```
cout << str.size() << endl;
```

30

b.
```
cout << str.substr(7, 8) << endl;
```

the time

c.
```
string::size_type ind = str.find('f');
string s = str.substr(ind + 4, 9);
cout << s << endl;
```

the party

d.
```
cout << str.insert(11, "best ") << endl;
```

Now is the best time for the party!

e.
```
str.erase(16, 14);
str.insert(16, "to study for the exam?");
cout << str << endl;
```

Now is the time to study for the exam?