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?**