# Ronish Shrestha CS360LAB Individual Assignment 1

### Q.no.1)

```
1 //Q.No.1
                                                                                  The itsy bitsy spider went up the water spout;
                                                                                  down came the rain and washed the spider out; out came the sun and dried up all the rain; and the itsy bitsy spider went up the spout again.
 2 #include <iostream>
 3 using std::cout;
4 using std::endl;
 5 using std::string;
 6 const char SEMI_COLON = ';';
 7 const string VERB1 = "went up ";
 8 const string VERB2 = "down came";
9 const string VERB3 = "washed ";
10 const string VERB4 = "out came";
11 const string VERB5 = "dried up ";
12 v int main(void){
13 string firstLine;
14 string secondLine;
15 string thirdLine;
16 string fourthLine;
17 firstLine = "The itsy bitsy spider " + VERB1 +"the water
    spout";
spout";
18 secondLine = VERB2 + "the rain and " + VERB3 +"the spider out";
19 thirdLine = VERB4 + "the sun and " + VERB5 +"all the rain";
20 fourthLine = "and the itsy bitsy spider " + VERB1 +"the spout
    again";
21 cout << firstLine << SEMI_COLON << endl;</pre>
22 cout << secondline << SFMT COLON << endl:
```

### 2a)

```
₩ тат.срр / ...
                                                                                                                                       325 UII 22.11.30,
                                                                                     Enter your first name and last name: Ronish Shrestha Enter today's date (month day year): 02 14 2024
1 //Q.No.2a)
   2 #include <iostream>
                                                                                     Shrestha, Ronish 2:14:2024
  3 using namespace std;
  5 v int main() {
   6
         string firstName, lastName;
           int month, day, year;
         cout << "Enter your first name and last name: ";
cin >> firstName >> lastName;
cout << "Enter today's date (month day year): ";</pre>
  8
   9
  10
  11
          cin >> month >> day >> year;
  12
  13
            cout << lastName << ", " << firstName << " " << month</pre>
       << ":" << day << ":" << year;
  14
          return 0;
  15 }
  16
```

```
1 #include <iostream>
                                                                        Enter your first name and last name: Ronish Shrestha
Enter today's date (month day year): 02 14 2024
2 using namespace std;
                                                                        Shrestha, Ronish 2:14:2024
3
4 v int main() {
        string firstName, lastName;
                                                                                                                    29s on 22:13:30, 02/14 V
         int month, day, year;
6
                                                                        Enter your first name and last name: Ronish Shrestha
         cout << "Enter your first name and last name: ";</pre>
7
                                                                        Enter today's date (month day year): 02 14 2024
8
         cin >> firstName >> lastName;
                                                                        Shrestha, Ronish
9
        cout << "Enter today's date (month day year): ";</pre>
                                                                        2:14:2024
10
        cin >> month >> day >> year;
11
12
        cout << lastName << ", " << firstName << endl; //</pre>
    Added endl for space
13
        cout << month << ":" << day << ":" << year;
14
         return 0;
15 }
16
```

#### 2c)

```
1 #include <iostream>
                                                                    Enter your first name and last name: Ronish Shrestha
                                                                    Enter today's date (month day year): 02 14 2024 Ronish Shrestha
 2 using namespace std;
                                                                    2:14:2024
 4 v int main() {
      string firstName, lastName;
 6
        int month, day, year;
 7
        cout << "Enter your first name and last name: ";</pre>
       cin >> firstName >> lastName;
 8
 9
       cout << "Enter today's date (month day year): ";</pre>
10
       cin >> month >> day >> year;
11
        cout << firstName << " " << lastName << endl; //</pre>
12
    Changed the order and used a blank space
        cout << month << ":" << day << ":" << year;
13
        return 0;
14
15 }
```

#### 3a)

```
1 #include <iostream>
                                                                    Full Name: Ronish Shrestha
 2 using std::cout;
                                                                    Length of the Full Name: 15
                                                                    Size of the Full Name: 15
 3 using std::string;
 5 const string FULL_NAME = "Ronish Shrestha"; // Replace
    with your actual name
 6
 7 \ int main(void) {
        cout << "Full Name: " << FULL_NAME << '\n';</pre>
 8
        cout << "Length of the Full Name: " <<</pre>
 9
    FULL_NAME.length() << '\n';</pre>
     cout << "Size of the Full Name: " << FULL_NAME.size()</pre>
10
    << '\n';
     return 0;
11
12
    }
```

3b)

```
1 #include <iostream>
                                                               Formatted Name: Shrestha, Ronish
2 using std::cout;
3 using std::string;
5 const string FULL_NAME = "Ronish Shrestha"; // Replace
    with your actual name
 6
7 v int main(void) {
8  // Assuming a single space between first and last
9
    size_t spaceIndex = FULL_NAME.find(' ');
      string lastName = FULL_NAME.substr(spaceIndex + 1);
10
11
      string firstName = FULL_NAME.substr(0, spaceIndex);
12
      cout << "Formatted Name: " << lastName << ", " <<</pre>
    firstName << '\n';</pre>
14
    return 0;
15 }
```

3c)

```
1 #include <iostream>
                                                                                                       5s on 22:29:50, 02/1
2 using std::cout;
                                                                Formatted Name: Shrestha, R.
  3 using std::string;
5 const string FULL_NAME = "Ronish Shrestha"; // Replace
     with your actual name
  7 v int main(void) {
 8
       // Assuming a single space between first and last
     names
      size_t spaceIndex = FULL_NAME.find(' ');
  9
 10
         string lastName = FULL_NAME.substr(spaceIndex + 1);
       char firstInitial = FULL_NAME[0];
 11
 12
        cout << "Formatted Name: " << lastName << ", " <<</pre>
 13
     firstInitial << ".\n";</pre>
 14
       return 0;
 15 }
 16
```

4a)

```
1 #include <iostream>
                                                                          1066
                                                                          1492
2 #include <iomanip>
                                                                           512
 3
                                                                            1
4 using std::cout;
                                                                           -23
 5 using std::right;
 6 using std::setw;
7
8 const int NUM1 = 1066;
9 const int NUM2 = 1492;
10 const int NUM3 = 512;
11 const int NUM4 = 1;
12 const int NUM5 = -23;
13
14 v int main(void) {
15
        cout << std::fixed << std::showpoint;</pre>
16
        // Set width and right justify the numbers
17
        cout << setw(10) << right << NUM1 << '\n';</pre>
18
        cout << setw(10) << right << NUM2 << '\n';</pre>
19
        cout << setw(10) << right << NUM3 << '\n';</pre>
20
        cout << setw(10) << right << NUM4 << '\n';</pre>
21
        cout << setw(10) << right << NUM5 << '\n';</pre>
22
23
        return 0;
24 }
```

```
1 #include <iostream>
                                                                      1066
                                                                      1492
2 #include <iomanip>
                                                                       512
                                                                        1
4 using std::cout;
                                                                       -23
5 using std::right;
                                                                The answer is 5.2204
6 using std::setw;
7 using std::fixed;
8 using std::setprecision;
10 const int NUM1 = 1066;
11 const int NUM2 = 1492;
12 const int NUM3 = 512;
13 const int NUM4 = 1;
14 const int NUM5 = -23;
15
16 v int main(void) {
17
      cout << fixed << std::showpoint;</pre>
18
19
      // Calculating the sum of the first two values and
 the sum of the last three values
20
    double sumFirstTwo = NUM1 + NUM2;
21
      double sumLastThree = NUM3 + NUM4 + NUM5;
22
23
        // Calculating the result and storing it in answer
24
        double answer = sumFirstTwo / sumLastThree;
25
```

4c)

```
1 #include <iostream>
                                                                       23.62
                                                                       46.00
2
   #include <iomanip>
                                                                       43.44
3
                                                                       100.10
4 using std::cout;
                                                                       98.98
5
  using std::right;
6
   using std::setw;
7 using std::fixed;
8
   using std::setprecision;
9
10 const double NUM1 = 23.62;
11 const double NUM2 = 46.0;
12 const double NUM3 = 43.4443;
13 const double NUM4 = 100.1;
14 const double NUM5 = 98.98;
15
16 v int main(void) {
17
        cout << fixed << std::showpoint;</pre>
18
19
        // Assuming we want a field width that can
    accommodate the largest number plus the decimal point and
    two decimal places
20
        int fieldWidth = 10;
21
22
        // Set the precision to two decimal places for
    floating-point numbers
23
        cout << setprecision(2);</pre>
24
```

### 4d)

```
#include <iostream>
                                                                    Run
                                                                                                          3s on 22:
 #include <iomanip>
                                                                     23.62
                                                                     46.00
 using std::cout;
                                                                     43.44
 using std::right;
                                                                    100.10
                                                                     98.98
 using std::setw;
 using std::fixed;
                                                                The sum of the numbers is
                                                                                              312.14
 using std::setprecision;
 const double NUM1 = 23.62;
 const double NUM2 = 46.0;
 const double NUM3 = 43.4443;
 const double NUM4 = 100.1;
 const double NUM5 = 98.98;
v int main(void) {
     cout << fixed << std::showpoint;</pre>
     // Calculate the sum of the numbers
     double sum = NUM1 + NUM2 + NUM3 + NUM4 + NUM5;
     // Set the precision to two decimal places for
 floating-point numbers
     cout << setprecision(2);</pre>
```

5a)

```
1 #include <iostream>
                                                                       Good Morning
                                                                                         Sarah
                                                                                                   Sunshine!
2 #include <string>
4 using std::cout;
 6 v int main(void) {
       // Calculate padding manually for each string to
    center them in 20 characters width
      std::string greeting = "Good Morning";
       std::string name = "Sarah";
std::string exclamation = "Sunshine!";
9
10
11
12
       // Calculate the padding needed for each string to be
    centered
13
      int paddingGreeting = (20 - greeting.length()) / 2;
14
        int paddingName = (20 - name.length()) / 2;
       int paddingExclamation = (20 - exclamation.length())
15
    / 2;
16
17
       // Print each string with manual padding to center
        cout << std::string(paddingGreeting, ' ') << greeting;</pre>
18
        cout << std::string(paddingName, ' ') << name;</pre>
19
       cout << std::string(paddingExclamation, ' ') <<</pre>
20
    exclamation;
21
22
        return 0;
```

## 5b)

```
1 #include <iostream>
                                                                                                                   5s on 23:01:41, 02/14
2 #include <iomanip>
                                                                             Good Morning
                                                                                                                       Sunshine!
                                                                                                        Sarah
4 v int main() {
        std::cout << std::setw(20) << std::right << "Good Morning"
                  << std::setw(20) << std::right << "Sarah"
6
                  << std::setw(20) << std::right << "Sunshine!";
8
9
        return 0;
10 }
11
```

```
> Run Good Morning Sarah Sunshine!
1 #include <iostream>
                                                                                          5s on 23:01:41, 02/
2 #include <iomanip>
                                                                                          5s on 23:02:41, 02/
                                                            Good Morning
4 using std::cout;
5 using std::setw;
                                                                  Sarah
6
7 v int main(void) {
                                                              Sunshine!
    // Print each string on separate lines with a blank line
8
  cout << setw(20) << std::internal << "Good Morning" <<</pre>
  "\n\n";
return 0;
4 }
5
                              Generate 🕱 🛽
```