Unit 9 Activities.

Activity 3

What is the cyclomatic complexity of the following piece of code? C#

```
public static string IntroducePerson(string name, int age)
{
    var response = $"Hi! My name is {name} and I'm {age} years old.";

    if (age >= 18)
      response += " I'm an adult.";

    if (name.Length > 7)
      response += " I have a long name.";

    return response;
}
```

Start with 1 as the baseline cyclomatic complexity.
The first if statement: if (age >= 18) adds 1.
The second if statement: if (name.Length > 7) adds another 1.
Baseline (1) + 2 (if statements) = 3.

The cyclomatic complexity of this method is 3.

Activity 4

Extend the following program to test accuracy of operations using the assert statement.

```
# Python String Operations
str1 = 'Hello'
str2 ='World!'

# using +
print('str1 + str2 = ', str1 + str2)

# using *
print('str1 * 3 =', str1 * 3)
```

```
# Python String Operations
str1 = 'Hello'
str2 = 'World!'

# using +
result_concat = str1 + str2
print('str1 + str2 =', result_concat)
# Assert the accuracy of concatenation
assert result_concat == 'HelloWorld!', "Concatenation result is incorrect."

# using *
result_multiply = str1 * 3
print('str1 * 3 =', result_multiply)
# Assert the accuracy of multiplication
assert result_multiply == 'HelloHelloHello', "Multiplication result is incorrect."

print("All assertions passed successfully!")
```

str1 + str2 = HelloWorld!
str1 * 3 = HelloHelloHello
All assertions passed successfully!