

CS 362 - Software Engineering II

Homework 6

Question 1

10 Points

- i) Does 100% branch coverage mean 100% statement coverage? Why?
- ii) Does 100% statement coverage mean 100% branch coverage? Why?
- iii) Explain i) and ii) with an example.

Deliverable:

Explain or give reasons for i) and ii) with an example (covers (iii))

Question 2

10 Points

```
def stateCoverage(x,y):  
    if(x < y):  
        if(x * 3 >= y * 2):  
            print("False")  
    if(x > y * y):  
        print("False")  
    if(x * 2 < y):  
        print("False")  
    print("True")
```

Demonstrate statement coverage for the above code snippet. What inputs would you provide to the code snippet to get maximum statement coverage? If a 100% statement coverage is possible, what are the inputs?

Inputs	Coverage %
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Deliverable:

Demonstrate inputs similar to the method used in class. Mention the inputs and the coverage percentage in the format shown below.

Inputs	Coverage %
a = , b =	

Question 3

10 Points

Demonstrate any two of the following:

- i) Statement coverage
- ii) Branch Coverage
- iii) Condition Coverage

- for the leap year program from Homework 1.

Deliverable:

- i) Include flowchart of leap year logic from Homework-1
 - ii) Demonstrate any two from i) ii) and iii) using the leap year code as an example.
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Question 4

10 Points

```
READ temp
READ hour
IF hour > 12 OR temp < 70 THEN
    PRINT "eat lunch"
END IF
PRINT "go "
```

```
IF temp > 75 THEN
    PRINT "swim"
END IF
```

What is the output for the given test cases?

For each of the inputs below, write the output, and the % of coverage.

Inputs	Output	Statement coverage
hour = 13, temp = 77		
hour = 14, temp = 74		

Deliverable:

- In the table below for the inputs provided, write the output and the % of statement coverage.
- Explain how you obtained the outputs and the % of statement coverage.
