Lecture 11 - In Class Exercise

Goal: Understand the basic concept of graph and apply graph coverage criteria.

1   Basic Graph Coverage

Instructions: Work with your neighbors in groups of 2.

Consider the following graph and test paths:

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N  = { 1, 2, 3, 4, 5, 6, 7, 8 }
N0 = { 1 }
Nf = { 8 }
E  = { (1, 2), (2, 3) (2, 8), (3, 4), (3, 5), (4, 3), (5, 6) (5, 7), (6, 7), (7, 2) }

Test paths:
t1 = [1, 2, 8]
t2 = [1, 2, 3, 5, 7, 2, 8]
t3 = [1, 2, 3, 5, 6, 7, 2, 8]
t4 = [1, 2, 3, 4, 3, 5, 7, 2, 8]
t5 = [1, 2, 3, 4, 3, 4, 3, 5, 6, 7, 2, 8]
t6 = [1, 2, 3, 4, 3, 5, 7, 2, 3, 5, 6, 7, 2, 8]
```

Based on the graph above, answer the following questions:

1. Draw the graph

2. List a minimal set of test paths that achieve Node coverage

3. List a minimal set of test paths that achieve Edge coverage

4. List the test requirements for Edge-Pair Coverage (hint: you should get 14 requirements of length 2)

5. Does the given set of test paths satisfy Node Coverage? If not, what is missing.

6. Does the given set of test paths satisfy Edge Coverage? If not, what is missing.

7. Does the given set of test paths satisfy Edge-Pair Coverage? If not, what is missing