Assignment 2 Firdaus Botirzoda

Problem 1

a. In the for loop, the index 'i' stops early and never reaches "0".

e. Let y = 2, x[] = {2, 3, 4}

When the for loop runs twice, in the third run we have i = 0 since size = 3 and size -1 = 2. The condition in the for loop kicks us out of the for loop. The program returns '-1', instead of '0'.

f.
```
    for (int i=x.length -1; i >= 0; i--)    // need to change
i>= 0; because it     never check the 0th index;
    {
        if (x[i] == y)
        {
            return i; //returns the index instead of the actual
number.
        }
    }
    return  -1;
}
```

Let y = 2, x[] = {2, 3, 4}

when the for loop runs twice, in the third run we have i = 0 since size = 3 and size -1 = 2. We have i = 0, and x[i] is equal to '2'. So the if statement is true, and the function returns index integer '0'.

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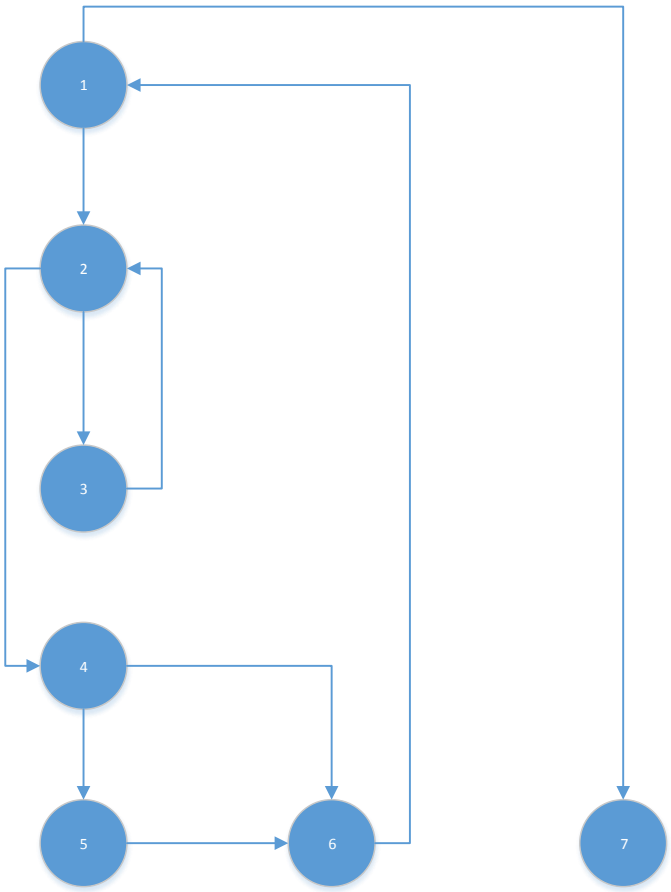


Part 2a.

b. {(1,2,3), (1,2,4), (2,4,5), (2,4,6), (2,3,2), (3,2,3), (3,2,4), (4,5,6), (4,6,1), (5,6,1), (6,1,7)}
c. T0 doesn't satisfy Edge-Pair Coverage. Edge-Pairs are not covered:(1,2,3), (2,4,6), (2,3,2), (3,2,3), (3,2,4), (4,6,1)
   T1 doesn't satisfy Edge-Pair Coverage. Edge-Pairs are not covered: (1,2,4), (2,4,5), (3,2,3), (4,5,6), (5,6,1)
d. The test path doesn't tour the simple path directly. Side-trip is (6, 1, 2)
e. Test requirements for Node Coverage:{1,2,3,4,5,6,7}.
   Test requirements for Edge Coverage: {(1, 2), (1, 7), (2, 3), (2, 4), (3, 2), (4, 5), (4, 6), (5, 6), (6, 1)}
   Test requirements Prime Path Coverage:{(1,2,4,5,6,1),(1,2,4,6,1), (2,4,5,6,1,2), (2,4,5,6,1,7), (3,2,4,6,1,7), (2,4,6,1,7), (3,2,3),(2,3,2),(3,2,4,5,6,1,7),(2,4,6,1,2),(4,5,6,1,2,4), (4,6,1,2,4), (4,6,1,2,3), (4,5,6,1,2,3), (5,6,1,2,4,5), (6,1,2,4,5,6), (6,1,2,4,6)}
f. Test path for Node coverage [1,2,4,5,6,1,7] [1,2,3,2,4,6,1,7]
g. Test path for Edge coverage [1,2,3,2,4,5,6,1,2,4,6,1,7]