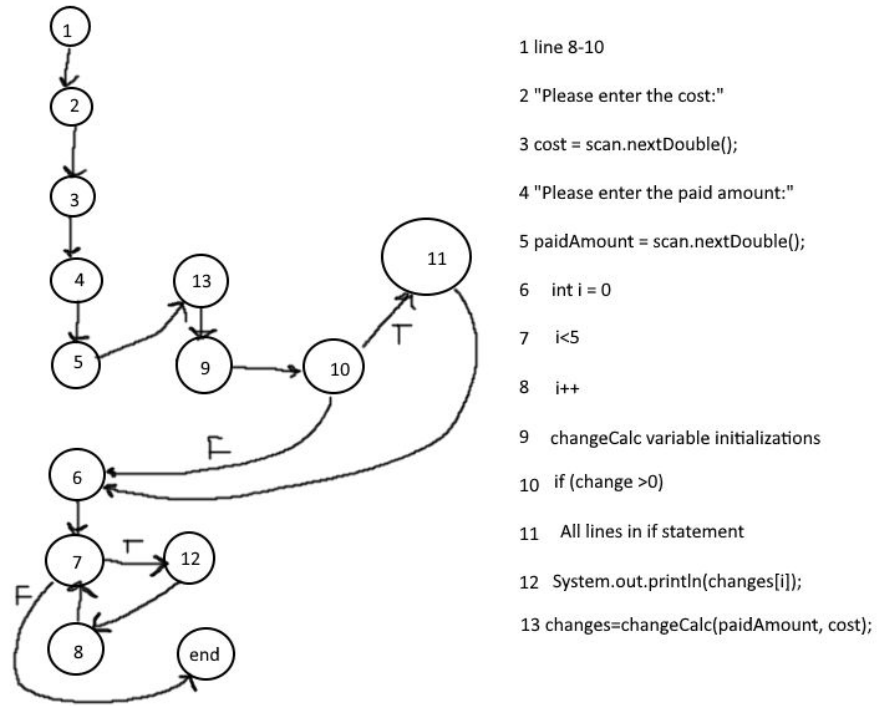


1)

a)



Test Case #	Input (Cost, Paid)	Output	Path
1	(100,100)	0,0,0,0,0	1-5,13,9,10,11,6,[(7,12,8)*5], 7,end
2	(101,100)	0,0,0,0,0	1-5,13,9,10,6,[(7,12,8)*5], 7,end
3	(97.99,100)	2,0,0,0,1	1-5,13,9,10,11,6,[(7,12,8)*5], 7,end
4	(50.58,100)	49,1,1,1,2	1-5,13,9,10,11,6,[(7,12,8)*5], 7,end

b)

I looked it up for IntelliJ since that is what I have been using and it has its own

built in coverage tool shown below.

Element	Class, %	Method, %	Line, %
com			
java			
javafx			
javax			
jdk			
junit			
META-INF			
netscape			
org			
sun			
Mod10	100% (1/1)	100% (2/2)	53% (15/28)

Running a single attempt from command line (100,100).

Element	Class, %	Method, %	Line, %
com			
java			
javafx			
javax			
jdk			
junit			
META-INF			
netscape			
org			
sun			
Mod10	100% (1/1)	100% (2/2)	100% (28/28)

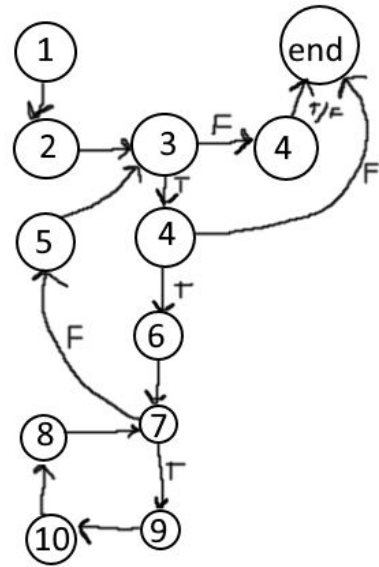
Running a single attempt from command line (100,99).

- c) At the start of changeCalc, if the paid amount does not have decimals into the place that the cost does ((100,99.9) or (100,97.53) then the rounding gets messed up.
- d) Just change the assignments into a series of while loops.

2)

a)

```
void bubbleSortEfficient(int A[], int size)
{
    int temp;
    bool exchanged = true;
    for (int i = 0; i < size && exchanged; i++)
    {
        exchanged = false;
        for (int j = size - 1; j >= i + 1; j--)
        {
            if (A[j] < A[j - 1])
            {
                temp = A[j];
                A[j] = A[j - 1];
                A[j - 1] = temp;
                exchanged = true;
            }
        }
    }
}
```



Test Case #	Input (A[], size)	output	path
1	({8,6},2)	{6,8}	1,2,3,4,6,7,9,10,8 ,7,5,3,4,end
2	({6,5,4},0)	{6,5,4}	1,2,3,4,end
3	({1},1)	{1}	1,2,3,4,6,7,5,3,4, end

b)

change	100% (1/1)	100% (1/1)	100% (10/10)
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### Path 1

<b>c</b> change	100% (1/1)	100% (1/1)	30% (3/10)
-----------------	------------	------------	------------

### Path 2

change	100% (1/1)	100% (1/1)	50% (5/10)
--------	------------	------------	------------

### Path 3

Element	Class, %	Method, %	Line, %
com			
java			
javafx			
javax			
jdk			
junit			
META-INF	100% (0/0)	100% (0/0)	100% (0/0)
netscape			
org			
sun			
change	100% (1/1)	100% (1/1)	100% (10/10)
changeTest	100% (1/1)	100% (3/3)	100% (13/13)

All Paths together