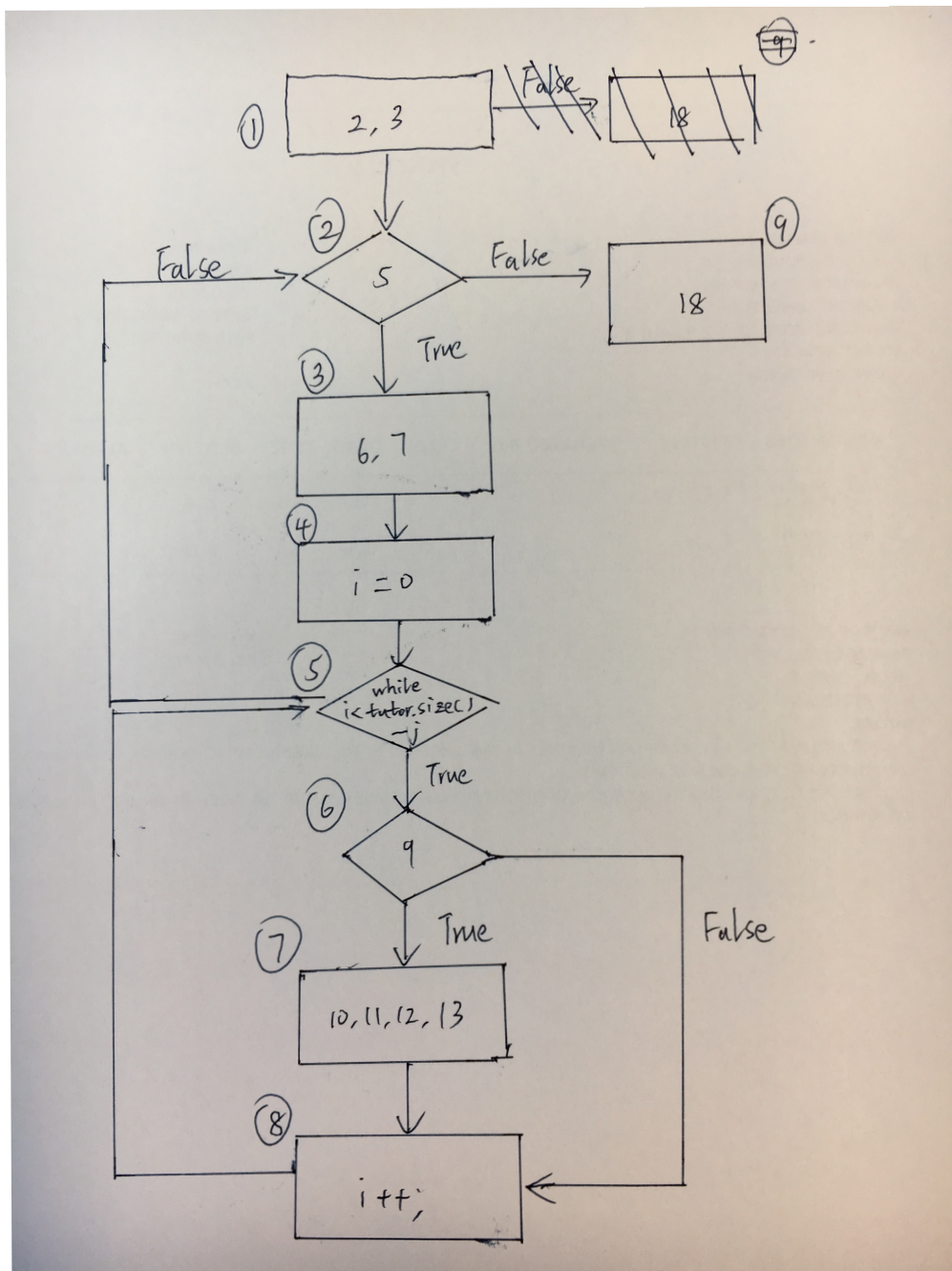


1. The corresponding control flow graph is illustrated as following



2.

The execution path for 100% statement coverage should be 1,2,3,4,5,6,7,4,2,8

The execution path for 100% branch coverage should be 1,2,3,4,5,7,4,2,8

since the sort application function is a sort function of the elements saved in the list "tutor" thus the test case for 100% statement coverage should be list<tutor> = [3,2]

the test case for 100% branch coverage should be list<tutor> = [2,3]

3.

To calculate the cyclomatic complexity, we need to know the edges and nodes of the control flow graph

nodes = 9

edges = 11

cyclomatic complexity = $11 - 9 + 2 = 4$

Basic path 1 : 1,2,3,4,5,6,7,8,5,2,9 test case: list<tutor> = [3,2]

Basic path 2 : 1,2,3,4,5,2,9 test case :list<tutor> = empty

Basic path 3 : 1,2,3,4,5,6,8,5,2,9 test case : list <tutor> = [2,3]

Basic path 4 : infusible path