

# Software Testing and Quality Assurance CITS5501 Semester 1, 2017

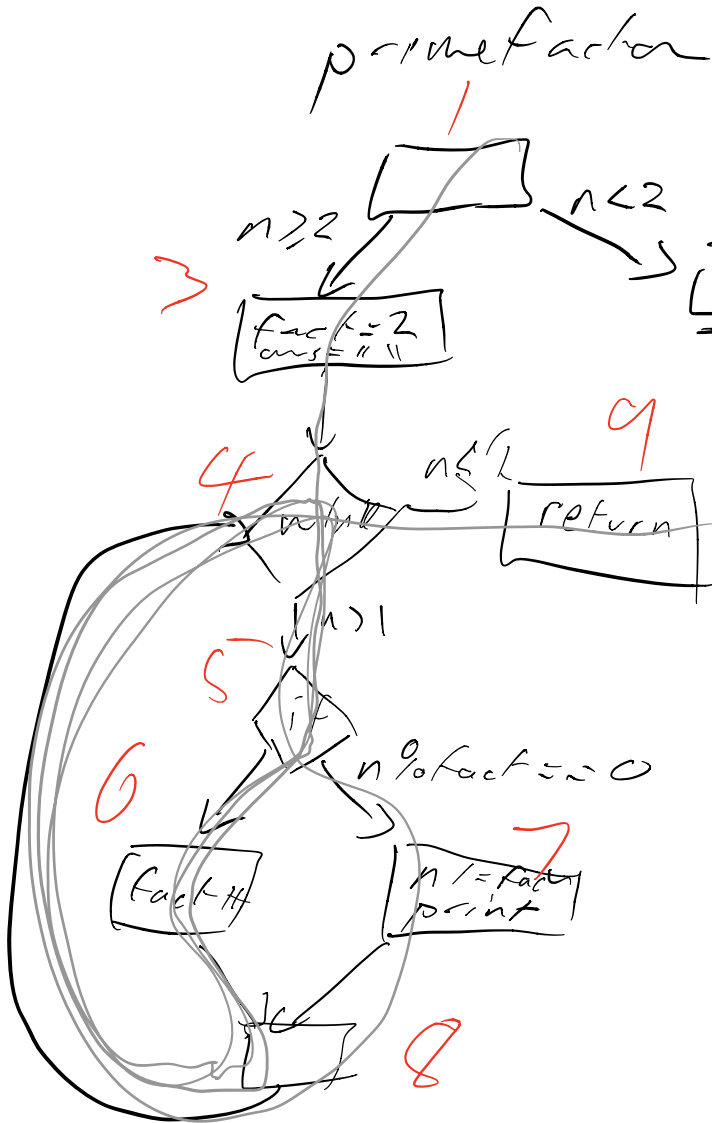
## Workshop 3: Whitebox testing

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- 1.) Write a python function that prints out the prime factorization of an integer. What assumptions do we need to make here?
- 2.) Construct a control flow graph of your program. Select a set of test cases that gives loop coverage of the graph.
- 3.) Build a finite state machine that describes the operation of a lift door. What states should it have, and what inputs must it be listening for.
- 4.) Build a set of test cases that give edge coverage of the graph, and clause coverage of the guards on each edge.

$$\frac{-1 \times 2 \times 2 \times 3 \times 3}{0 \quad 0}$$

$$\frac{0 \quad 0}{1 \quad 1}$$



1 3 4 5 6 8  
 4 5 6 8  
 4 5 6 8  
 4 5 7 8 9

1 2 = 0

1 3 4 9? NA

4 5 6 8 4 3

4 5 7 8 4 3

5 6 8 4 9 NA

5 7 8 4 9 3

8 4 5 7 8 3

6 8 4 5 6 5

7 9 1 5 7 1

8	8	4	0	1	4	6	8	4	5	7	3,6	
5	6	8	4	5	3	7	8	4	5	6	6	
5	7	8	4	5	6	8	4	5	6	8	6	
1	3	4	5	6	2	3						
1	3	4	5	7	8	6						

0, 3 4 5 6

