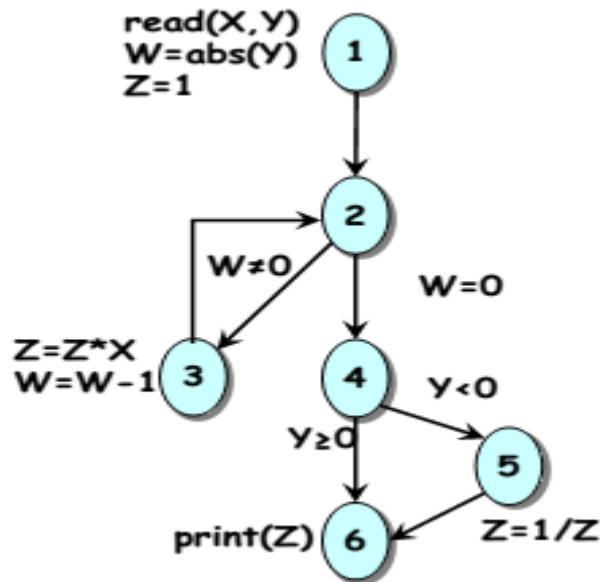


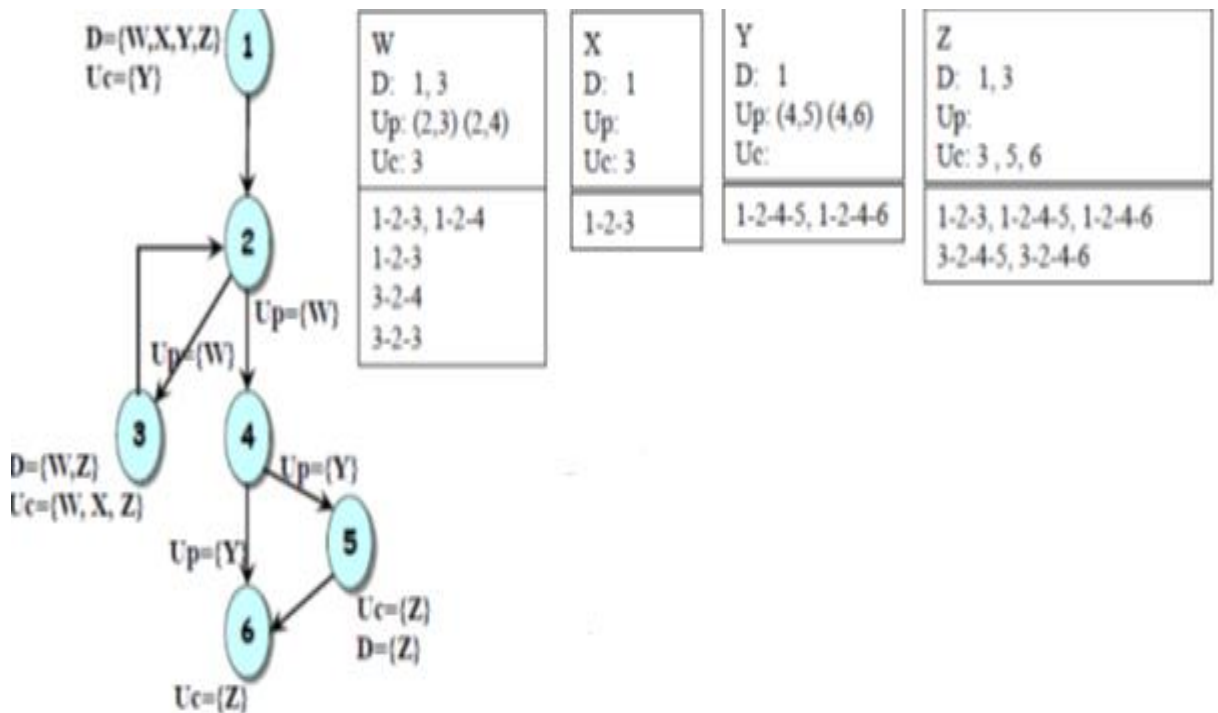
Module: Software testing and quality analysis
Assignment 2: white box testing (DFG)

Correction

Exercise 02 :
1-

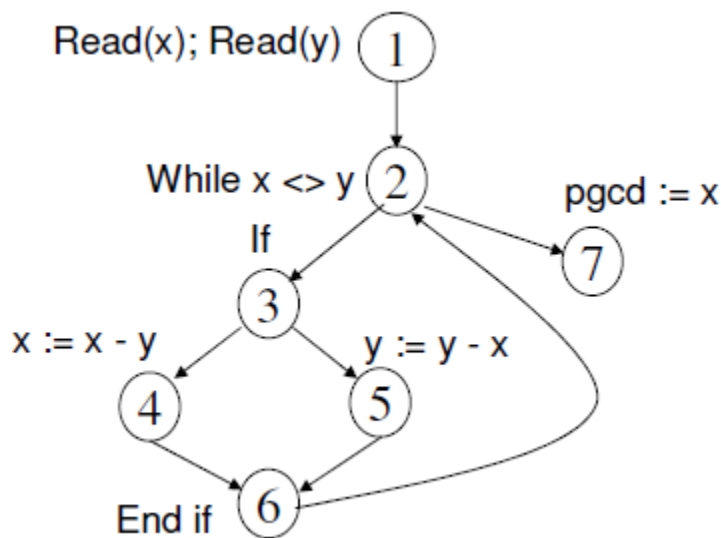


2-



Exercise 01 :

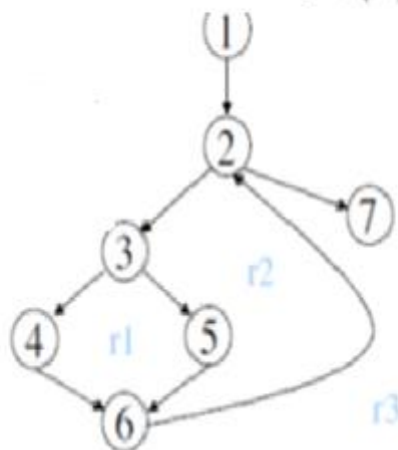
1. The graph :



2- Number of independent paths in G.

$$V(G) = \text{nb branches} - \text{nb nodes} \quad V(G) = 8 - 7 + 2 = 3$$

$$V(G) = 2 + 1 = 3$$



3- Independent paths.

- 1-2-7
- 1-2-3-4-6-2-7 (New branches : 2-3, 3-4, 4-6, 6-2)
- 1-2-3-5-6-2-7 (New branches : 3-5, 5-6)

Paths and test cases

1-2-7

- $D_1 = \{(x,y) \mid x = y\}$
- : $\langle x=3, y=3 \rangle$

1-2-3-4-6-2-7

- $D_2 = \{(x,y) \mid x > y, x - y = y\}$
- : $\langle x=8, y=4 \rangle$

1-2-3-5-6-2-7

- $D_3 = \{(x,y) \mid x < y, x = y - x\}$
- : $\langle x=3, y=6 \rangle$

test cases

: $\{\langle x=3, y=3 \rangle, \langle x=8, y=4 \rangle, \langle x=3, y=6 \rangle\}$

