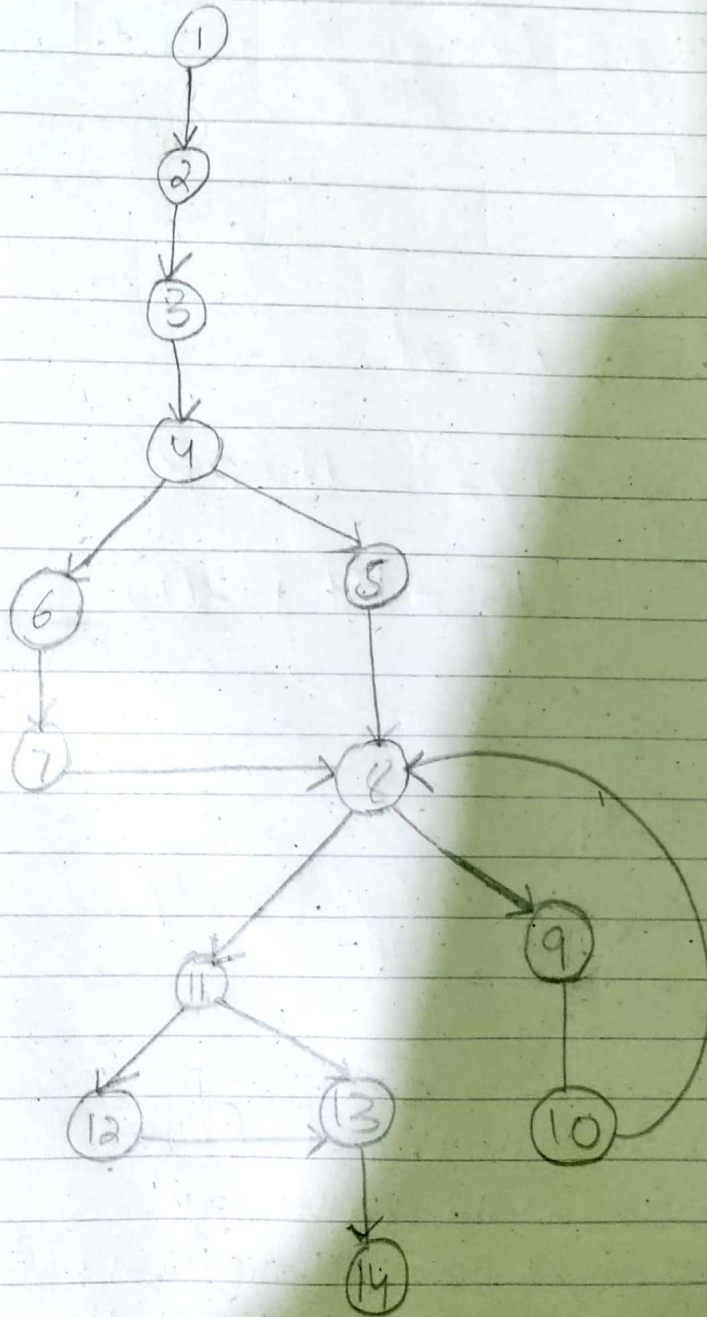


Software Engineering Assignment #2

a) ① Control flow graph Method:



Nodes = 14 , Edges = 16

Cyclomatic complexity = no of ^{regions} decision points + 1
= 4 + 1
= 5

② Cyclomatic Using decision point method

$$\text{Cyclomatic complexity} = \text{no. of decision points} + 1$$

$$= 3 + 1$$

$$= 4$$

③ Using formula Method

$$\text{Cyclomatic complexity} = E - N + 2P$$

$$= 16 - 14 + 2(1)$$

$$= 2 + 2$$

$$= 4$$

b) The cyclomatic complexity is 4

Independent Paths :

1- $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 8 \rightarrow 11 \rightarrow 13 \rightarrow 14$

2- $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 8 \rightarrow 9 \rightarrow 10 \rightarrow 8 \rightarrow 11 \rightarrow 13 \rightarrow 14$

3- $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 8 \rightarrow 9 \rightarrow 10 \rightarrow 8 \rightarrow 11 \rightarrow 12 \rightarrow 13 \rightarrow 14$

4- $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 6 \rightarrow 7 \rightarrow 8 \rightarrow 9 \rightarrow 10 \rightarrow 11 \rightarrow 12 \rightarrow 13 \rightarrow 14$

	Invalid case	valid case
c)	Z is -ve Power is -ve	Z is +ve Power is +ve