ROXAS, ALLIYAH FRANCINE J.

BSCPE 2-2

CPEN 65

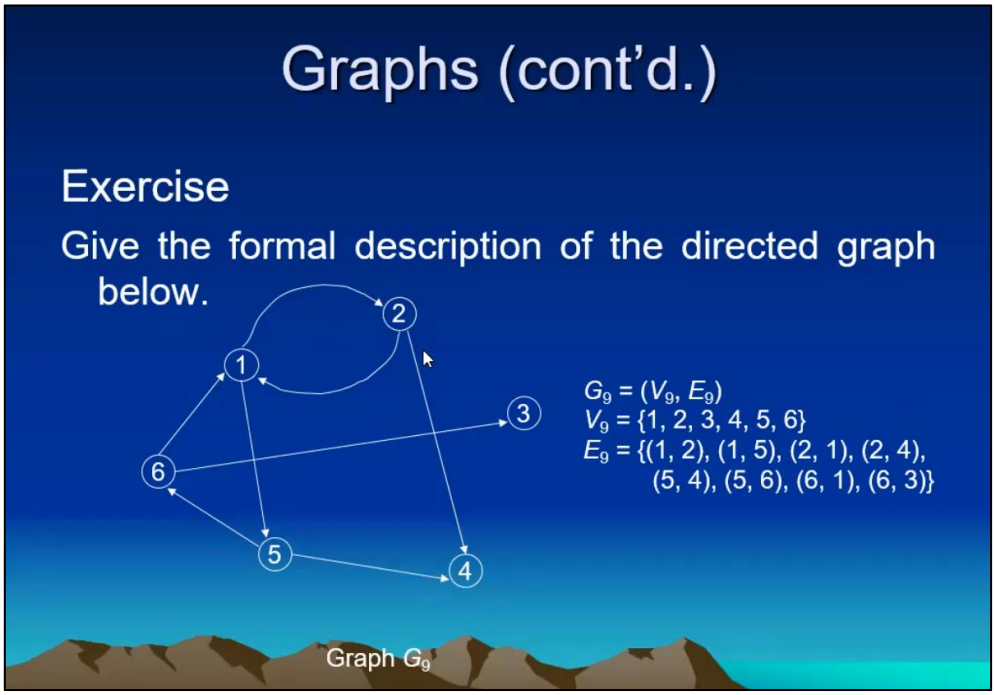

Figure 1

Path	Length
{1,2}	1
{1,2,4}	2
{1,5,6}	2
{2,1}	1
{2,4}	1
{5,4}	1
{5,6}	1
{5,6,1}	2
{5,6,1,2}	3
{5,6,1,2,4}	4
{6,3}	1
{6,1,2}	2
{6,1,2,4}	3

Simple Path: {1,2,4}, {1,5,6}, {2,1}, {2,4}, {5,4}, {5,6,1,2,4}, {6,3}, {6,1,2,4}

Simple Cycle: {2,1,5,6,1,2}, {1,5,6,1}, {1,2,1}, {2,1,2}

	Indegree	Outdegree
Node 1	2	2
Node 2	1	2
Node 3	1	0
Node 4	2	0
Node 5	1	2
Node 6	1	2

	Vertices adjacent to	Vertices adjacent from
Node 1	2 and 6	2 and 5
Node 2	1	1 and 4
Node 3	6	None
Node 4	2 and 5	None
Node 5	1	4 and 6
Node 6	5	1 and 3

Edges incident to	
Node 1	(1,2),(2,1),(1,5),(6,1)
Node 2	(1,2),(2,1),(2,4)
Node 3	(6,3)
Node 4	(2,4),(5,4)
Node 5	(1,5),(5,4),(5,6)
Node 6	(6,1), (6,3), (6,5)

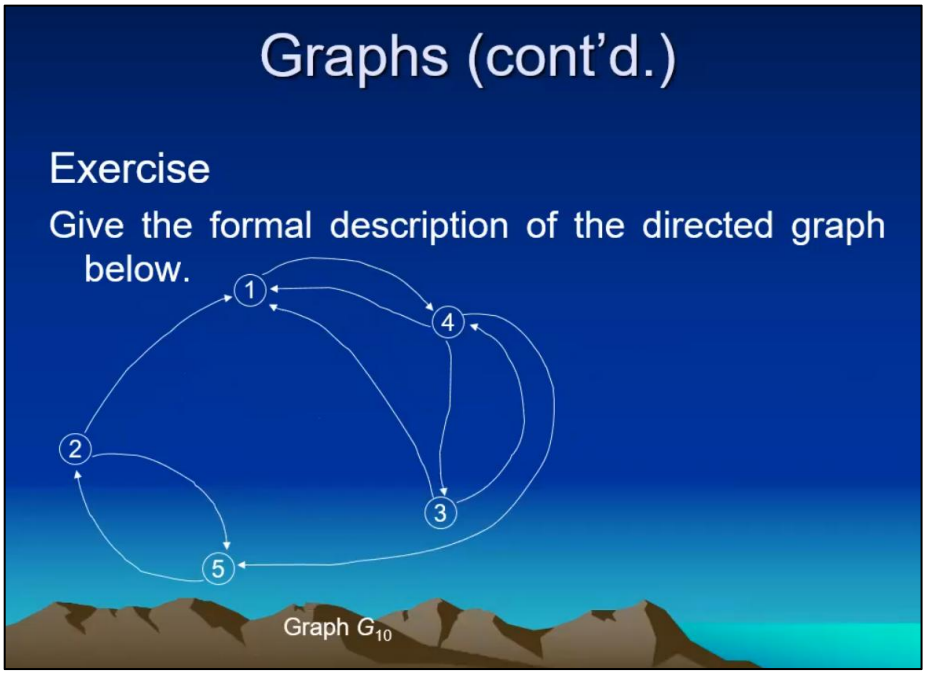

Figure 2

$G_{10} = (V_{10}, E_{10})$

$V_{10} = \{1,2,3,4,5,6\}$

$E_{10} = \{(1,4), (2,1), (2,5), (3,1), (3,4), (4,1), (4,3), (4,5), (5,2)\}$

Path	Lentgth
{1,4}	1
{1,4,3}	2
{1,4,5}	2
{1,4,5,2}	3
{2,5}	1
{2,1}	1
{2,1,4}	2
{2,1,4,3}	3
{2,1,4,5}	3
{3,1}	1
{3,1,4}	2
{3,1,4,5}	3
{3,1,4,5,2}	4
{3,4,1}	2
{4,1}	1
{4,3}	1
{4,3,1}	2
{4,5}	1

{4,5,2}	2
{4,5,2,1}	3
{5,2}	1
{5,2,1}	2
{5,2,1,4}	3
{5,2,1,4,3}	4

Simple Path: {1,4,5,2}, {2,1,4,3}, {2,1,4,5}, {3,1,4,5,2}, {1,4,3}, {1,4,5}, {3,4,1}, {4,1}, {4,3,1}

Simple Cycle: {1,4,1}, {1,4,3,1}, 1,4,5,2,1}, {2,1,4,5,2}, {2,5,2}, {3,1,4,3}, {4,3,1,4}, {4,5,2,1,4}, {5,2,5}, {5,2,1,4,5}

	Indegree	**Outdegree**
Node 1	3	1
Node 2	1	2
Node 3	1	2
Node 4	2	1
Node 5	2	2

	Vertices adjacent to	**Vertices adjacent from**
Node 1	2,3,4	4
Node 2	5	1 and 5
Node 3	4	1 and 4
Node 4	1 and 3	1,3,5
Node 5	2 and 4	2

Edges incident to	
Node 1	(1,4), (2,1),(3,1), (4,1)
Node 2	(2,1),(2,5),(5,2)
Node 3	(3,1),(3,4),(4,3)
Node 4	(4,1),(4,3),(4,5),(1,4),(3,4)
Node 5	(5,2),(2,5),(4,5)