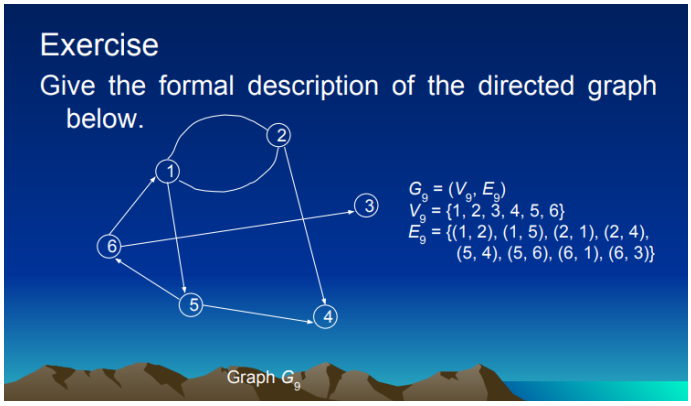
Aguado, Danielle Ysabelle M.
BSCpE 2-1

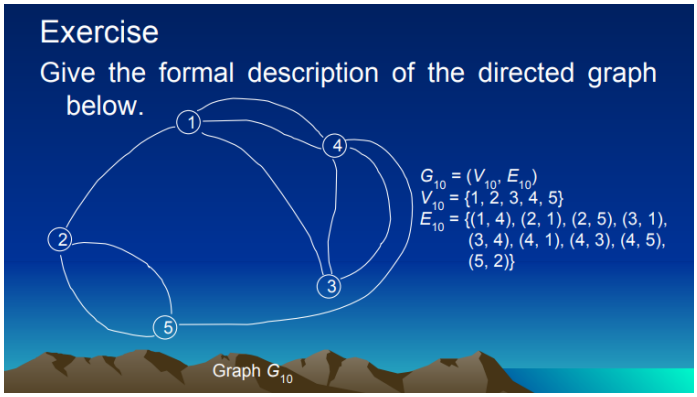
Graph 9



Outdegree of:
1 is 2
2 is 2
3 is 0
4 is 0
5 is 2
6 is 2
Indegree of:
1 is 2
2 is 1
3 is 1
4 is 2
5 is 1
6 is 1

- The vertices adjacent to Node 1 are nodes 2 and 6. The vertices adjacent from Node 1 are nodes 2,6,5. The edges incident to Node 1 are (1,2), (1,5), (2,1), (6,1).

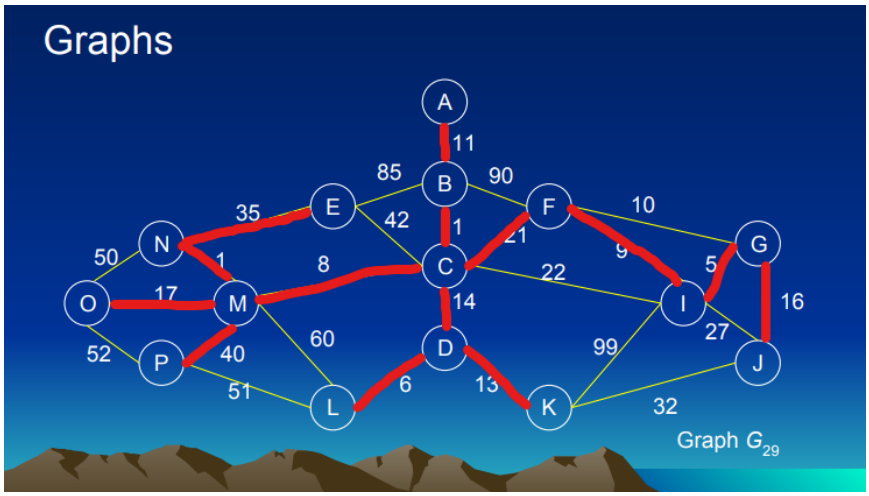
Graph 10



Outdegree of:
1 is 1
2 is 2
3 is 2
4 is 3
5 is 1
Indegree of:
1 is 3
2 is 1
3 is 1
4 is 2
5 is 2

- The vertices adjacent to Node 1 are nodes 2 and 4. The vertices adjacent from Node 1 are nodes 2, 3, 4. The edges incident to Node 1 are (1,4), (2,1), (3,1), (4,1).

Graph 29



G_{29} = (V_{29}, E_{29})

V_{29} = { A, B, C, D, E, F, G, I, J, K, L, M, N, O, P}

E_{29} = {(A,B), (B,E), (B,F), (C,D), (C,E), (C,F), (C,I), (C,M), (D,K), (D,L), (E,N), (F,G), (F,I), (G,I), (G,J), (I,J), (I,K), (J,K), (L,M), (L,P), (M,N), (M,O), (M,P), (N,O), (O,P)

Kruskal's Algorithm

Edge (B,C) w(B,C) = 1
Edge (M,N) w(M,N) = 1
Edge (G,I) w(G,I) = 5
Edge (D,L) w(D,L) = 6
Edge (C,M) w(C,M) = 8
Edge (F,I) w(F,I) = 9
Edge (F,G) w(F,G) = 10
Edge (A,B) w(A,B) = 11
Edge (D,K) w(D,K) = 13
Edge (C,D) w(C,D) = 14
Edge (G,J) w(G,J) = 16
Edge (M,O) w(M,O) = 17
Edge (C,F) w(C,F) = 21
Edge (C,I) w(C,I) = 22
Edge (I,J) w(I,J) = 27
Edge (J,K) w(J,K) = 32
Edge (E,N) w(E,N) = 35
Edge (M,P) w(M,P) = 40
Edge (C,E) w(C,E) = 42
Edge (N,O) w(N,O) = 50
Edge (L,P) w(L,P) = 51
Edge (O,P) w(O,P) = 52
Edge (L,M) w(L,M) = 60
Edge (B,E) w(B,E) = 85
Edge (B,F) w(B,F) = 90
Cost of Minimum Spanning Tree = 197

Prim's Algorithm

11 + 1 + 14 + 6 + 13 + 21 + 9 + 5 + 16 + 8 + 1 + 35 + 17 + 40 = 197