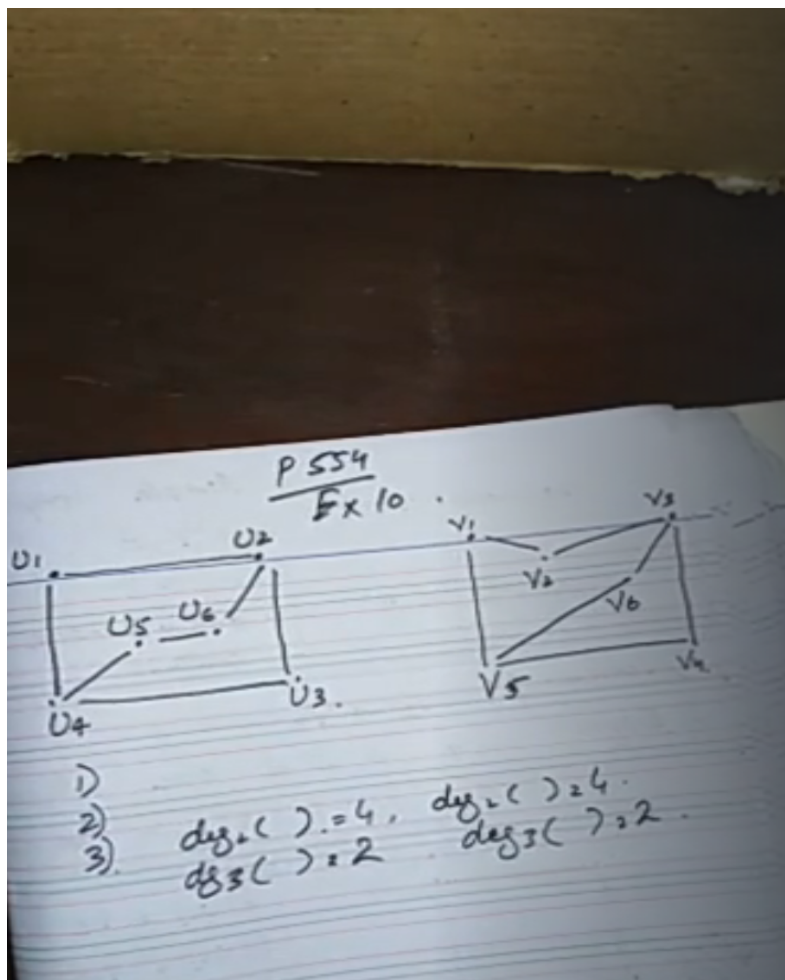# Discrete Lecture # 22

- Isomorphism (simple graph)
  - G1 = (V1 , E 1)
  - G2 = (V2 , E2)
  - Two graphs are isomorphic if and only if the conditions are met , isomorphism is usually checked between two graphs and the terms for the two vertices are G1 and G2.
    - 1) If number of vertices in G1 are same as G2
    - 2) if number of edges in G1 are same as G2
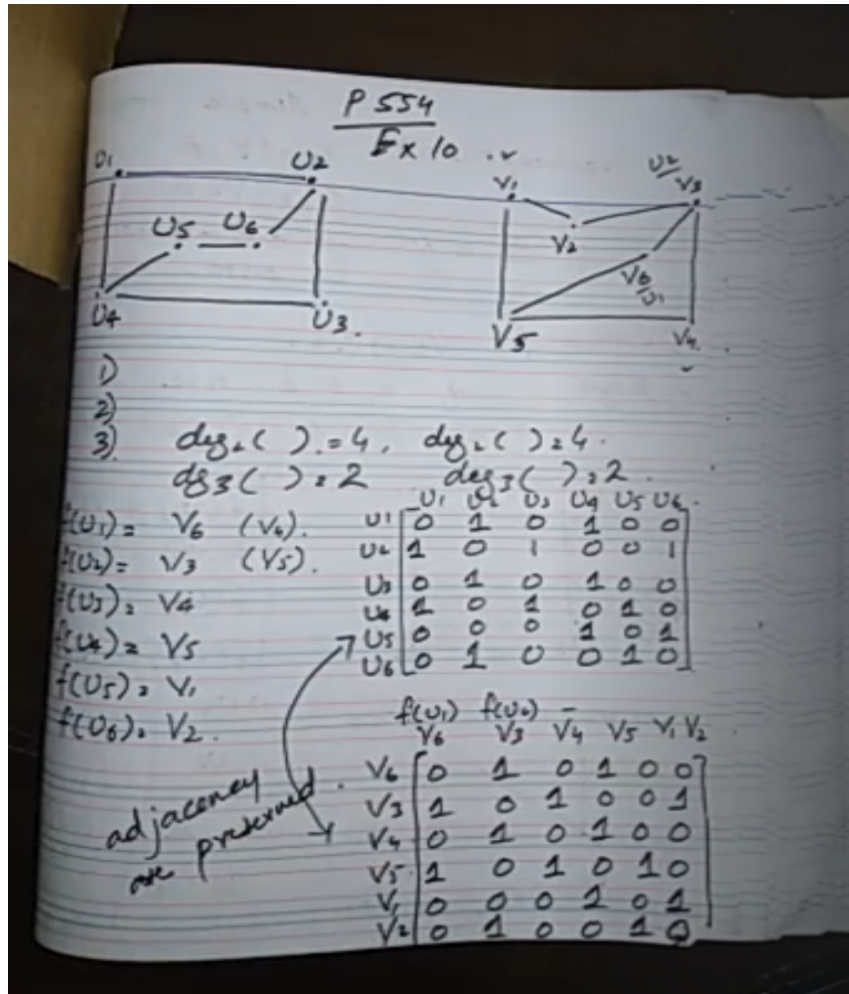   - 3) if number of same degree vertices are same

  -
    - 4) we check the degree of adjacent vertices
    - 5) Assignment of vertices
      - Check the adjacent degree of the vertices

- - If you are assignment a vertex A with adjacent degree of 1 with adjacent vertices in G1 then you must assign it to a vertex with the same features in G2
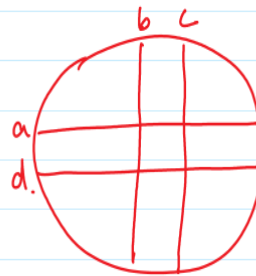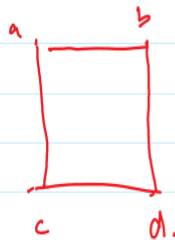 -
  - ■
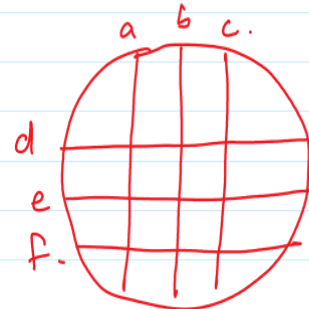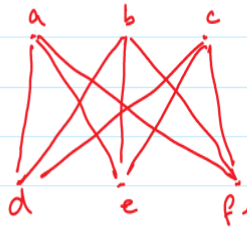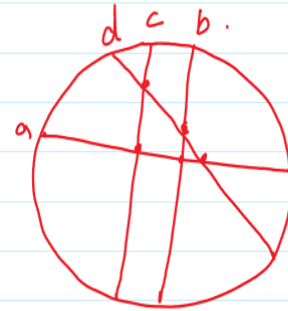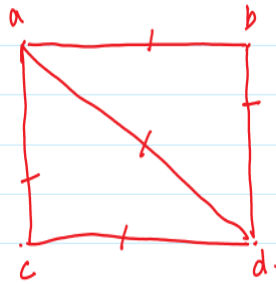- ■ 6) Adjacency matrix of both graphs G1 and G2

  -
  - ADJACENCY MATIX WILL BE THE SAME
  - ADJ.MATRIX OF G2 WILL ALWAYS BE A SYMMETRIC MATRIX
  - ■
- Circular Graph :

Circular Graph

- Representing the graph in circles
  - Each vertex is a chord
  - Each cord intersecting other cord means they have a path