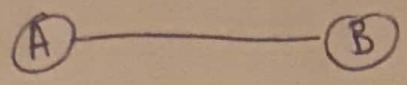
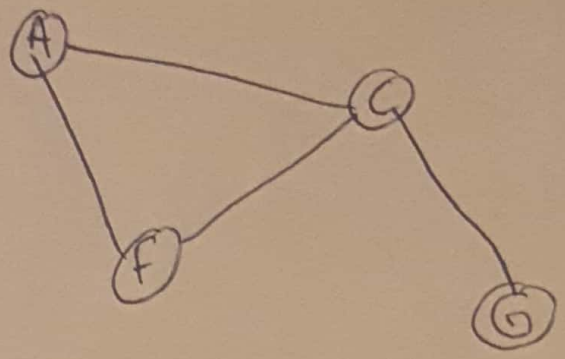
# Lab 8



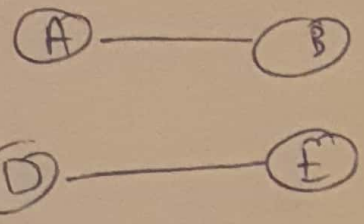
1) A)




B)




C)




D), there is not subset x of vertex s.t $V$ so that $H = G[x]$ because if we took the graph composed of vertexes A, B, F we need the edge that links B and F. that it is not exist. in H.

E) $V_1 = \{A, B, C, D, F, H\}$

$V_2 = \{D, E, I\}$.

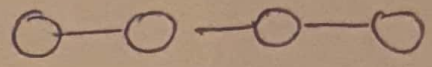
3) G (V, E) is a simple connected

3) a) Suppose is that $V = V_1 \cup V_2 \cup \dots V_k$ where $V_i$ are all disjoint

find $(x, y)$ in E that $x$ in $V_i$ and $y$ in $V_j$

so there will be a necessary path between every two vertices

so this edge exists

b) consider the following graph 

$n = 4$ so ~~$C(n-1, 2) =$~~

$\Leftrightarrow 3 > \frac{3 \times 2}{2}$

$\Leftrightarrow 3 > 3$ so it is false

c) if G have n vertices, G must have at least $n-1$ edges to be connected

Mazal exercice 2