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ID 933316280
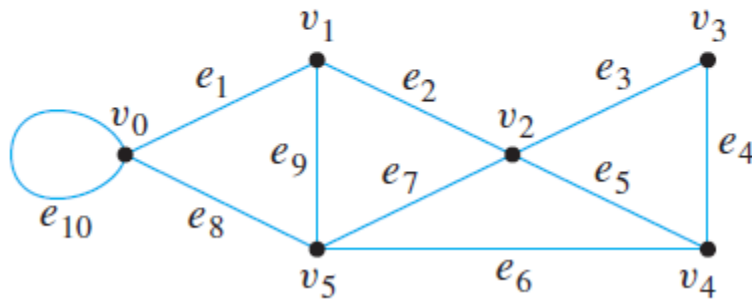Professor Ehsan
CS 225 Section 400, Su 2017

Assignment 7 – Due 8/13/2017

Part II. Exercise Set 10.2 [2, 14]

2 Q: In the graph below, determine whether the following walks are trails, paths, closed walks, circuits, simple circuits, or just walks.

a. $v_1 e_2 v_2 e_3 v_3 e_4 v_4 e_5 v_2 e_2 v_1 e_1 v_0$

b. $v_2 v_3 v_4 v_5 v_2$

c. $v_4 v_2 v_3 v_4 v_5 v_2 v_4$

d. $v_2 v_1 v_5 v_2 v_3 v_4 v_2$

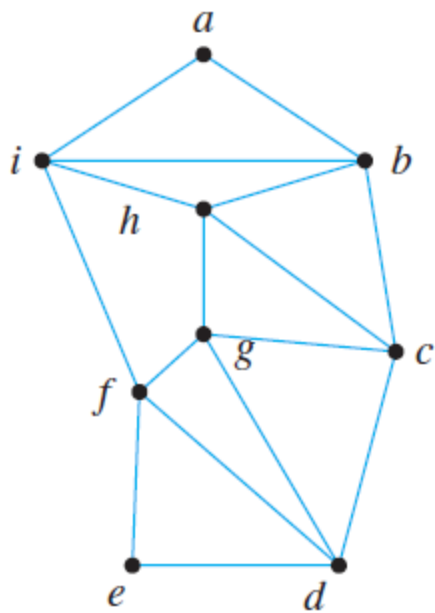e. $v_0 v_5 v_2 v_3 v_4 v_2 v_1$

f. $v_5 v_4 v_2 v_1$

A:

a) **Walk**
b) **Simple circuit**
c) **Closed walk**
d) **Circuit**
e) **Trail**
f) **Path**

14Q: Determine which of the graphs in 12-17 have Euler circuits. If the graph does not have an Euler circuit, explain why not. If it does have an Euler circuit, describe one.

14.

A: Yes this is an Euler circuit since it fits the definition of an Euler circuit. This graph contains every vertex and every edge (all vertices are connected by at least one edge). If I start at *a* I can complete the graph by visiting every edge just once and end up back at *a*. Ex. abcdgchbihgfdefia