



BAHRIA UNIVERSITY (KARACHI CAMPUS)

Department of Software Engineering.

Assignment 03 (Spring 2023)

Course Title: Discrete Structures

Class: BSE 2B

Course Instructor: Faiz UL Haque Zia

Submission: 06 June 2023

Course Code: CSC-115

Shift: Morning

Time: 6 Days

Max Marks: 05 Points

Assignment No 03

Submitted By:

Name: _____ Abdullah

Registration Number: _____ 81962

Section: _____ 2 B

- Question # 02 -

Solution:-

for 1st iteration

$$PR(A) = 1 - d + d \left(\frac{PR(D)}{1} \right)$$

$$= 1 - 0.85 + 0.85(1)$$

$$\boxed{PR(A) = 1}$$

$$PR(B) = 1 - d + d \left(\frac{PR(A)}{2} \right)$$

$$PR(B) = 1 - 0.85 + 0.85 \left(\frac{1}{2} \right)$$

$$\boxed{PR(B) = 0.575}$$

$$PR(C) = 1 - d + d \left(\frac{PR(B)}{2} \right)$$

$$\boxed{PR(C) = 0.575}$$

$$PR(D) = 1 - d + d \left(\frac{PR(A)}{2} + \frac{PR(B)}{2} + \frac{PR(E)}{1} \right)$$

$$= 1 - 0.85 + 0.85 \left(\frac{1}{2} + \frac{1}{2} + 1 \right)$$

$$\boxed{PR(D) = 1.85}$$

$$PR(E) = 1 - d + d \left(\frac{PR(C)}{1} \right)$$

$$PR(E) = 1 - 0.85 + 0.85 \left(\frac{1}{1} \right)$$

$$\boxed{PR(E) = 1}$$

For 2nd Iteration.

$$PR(A) = 1 - 0.85 + 0.85 \left(\frac{1.85}{1} \right)$$

$$\boxed{PR(A) = 1.722}$$

$$PR(B) = 1 - 0.85 + 0.85 \left(\frac{1}{2} \right)$$

$$\boxed{PR(B) = 0.875}$$

$$PR(C) = 1 - 0.85 + 0.85 \left(\frac{0.575}{2} \right)$$

$$\boxed{PR(C) = 0.394}$$

$$PR(D) = 1 - 0.85 + 0.85 \left(\frac{1}{2} + \frac{0.575 + 1}{2} \right)$$

$$\boxed{PR(D) = 1.669}$$

$$PR(E) = 1 - 0.85 + 0.85 \left(\frac{0.575}{1} \right)$$

$$\boxed{PR(E) = 0.638}$$

For 3rd Iteration,

$$PR(A) = 1 - 0.85 + 0.85 \left(\frac{1.669}{1} \right)$$

$$\boxed{PR(A) = 1.568}$$

$$PR(B) = 1 - 0.85 + 0.85 \left(\frac{1.722}{2} \right)$$

$$\boxed{PR(B) = 0.881}$$

$$PR(C) = 1 - 0.85 + 0.85 \left(\frac{0.575}{2} \right)$$

$$\boxed{PR(C) = 0.394}$$

$$PR(D) = 1 - 0.85 + 0.85 \left(\frac{1.722}{2} + \frac{0.575}{2} + \frac{0.638}{1} \right)$$

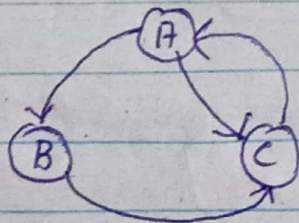
$$\boxed{PR(D) = 1.668}$$

$$PR(E) = 1 - 0.85 + 0.85 \left(\frac{0.394}{1} \right)$$

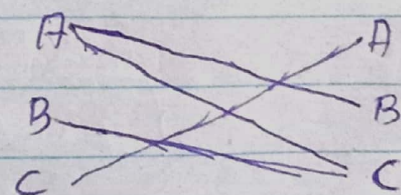
$$\boxed{PR(E) = 0.484} \text{ Ans}$$

Question # 02:

solution



Consumer producer



		producer		
		V_1	V_2	V_3
Consumer	V_1	0	1	1
	V_2	0	0	1
	V_3	1	0	0

Producer — Producer Cosine similarities

$$\text{Cosine}(V_1, V_2) = 0$$

$$\text{Cosine}(V_1, V_3) = 0$$

$$\text{Cosine}(V_2, V_3) = 0$$

Ans.