CSE427s - 8 [P] RS3   25% (1/4)

✓ **1. Select all that applies to a Collaborative Filtering recommendation approach. From the point of view of the user that gets the recommendataion, collaborative filtering recommendations are**

- (A) based on this user's preferences ✓
- (B) the same for every user (not personalized)
- (C) based on all other user's preferences
- (D) based on similar user's preferences ✓
- (E) niche/speciality items

✗ **2. Just by looking at the data in the example (you don't have to do any computation), which user do you expect to have the highest similarity with ME?**

- (A) A
- (B) B
- (C) C
- (D) D

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

✗ **3. Just by looking at the data in the example (you don't have to do any computation), which user do you expect to have the lowest similarity with ME?**

- (A) A
- (B) B
- (C) C
- (D) D ✗

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

⊘ **4. Give the data representation used in the Jaccard similarity measure for user B and ME.**

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

⊘ **5. Compute the Jaccard similarity between J(B, ME).**

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

6. How about cosine? Give the **data representation** in order to compute Cos(A,ME).

A= [4, 1, 1] B=[2, 5 ,4]

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

7. Compute Cos(A,ME).

0.597

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

8. Compute P(B,ME) and P(C,ME).

s B 2.9
s Me 3
mean B = 3.2
mean Me = 3.2

	HP1	HP2	HP3	TW	SW1	SW2	SW3	TH
A	4			5	1		1	
B	5	5	4			1	1	
C			1	2	4	5		5
D		3					3	3
ME	2		1		5		4	4

1.8 0.8 -2.2
-1.2 -2.2 0.8

r=-0.6528

9. Which similarity measure models our expectations best?

(A) Jaccard

(B) Cosine

(C) Pearson

(D) None really.