## CS 1656 - Introduction to Data Science

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## 11b - Association Rule Mining

Assume the following market basket transactions for a fictional super-market that carries the following products:  $\bf A$  (angel hair pasta),  $\bf B$  (bread),  $\bf C$  (cereal),  $\bf D$  (diapers),  $\bf E$  (eggs), and  $\bf F$  (flour).

#1	Α	В		D		F
#2		В	С	D		
#3	Α	В	С	D		
#4	Α	В		D	Е	F
#5		В		D		F
#6	Α	В	С		Е	
#7	Α	В	С	D		
#8			С		Е	F
#9	Α	В	С	D		F
#10			С	D	Е	

(1) Compute the support counts for each of the size 1 itemsets:

	Α	В	С	D	Е	F
Count:						

(2) Compute the support counts for each doubleton (i.e., size 2 itemsets):

	F	Е	D	С	В
А	AF:	AE: BE: CE: DE:	AD:	AC: BC:	AB:
В	BF:	BE:	AD: BD: CD:	BC:	
С	CF:	CE:	CD:		
D	DF:	DE:			
Е	EF:				

- (3) Compute the support counts for the following size 3 itemsets:
  - ABC:
  - ABD:
  - ABE: