CMPE-256- Assignment-6 Starbucks Hot Benerages cluster PartA: To approach this problem, we will be using K-means clustering with K=3 achich will help us obstain 3 dusters which will give us three busiest/popular times of the days. This will help us store manager provide coupons to the customers to maninize testomer Loyalty. Lets take f Lets choose (1,7), (2,1) and as our initial dusters as they are the farthest points.

	Subject	PTIN	ler	H	B Inder.			
INC		(0,0)6.4			5			
	2	1		P. S. Z. F.	7			
	38	2			6			
	4		200		9			
	5		3		€3			
	6		3 8 1		26			
	A A		3		8			
	8		3		4			
	q	C Mail		P. N. J.	5			
Li Co	10	· · · · · · · · · · · · · · · · · · ·	Total .	Val. 6	8			
		55	P		4			
	12	35	(3)	4 74	7			
	13	6	(3,00	111	9			
	14	7			2_1			
	15	77			1.3			
	16	7			4			
	17	8	3	PART I				
	18	8	3		7.			
			Cara					
			The same of					

Lets choose our unitial clusters as (1,7), (8,1) and (6,9). as they are farthest points.

	farthe	st pai	nts.			
	12	Individ	ual	à Cent	roid.	
clus	ters 1	2		(1	(F,	
	tr 2	13		(6	,9)	
de	esty 3	1.7	-8		8,1)	
	Cluste	1,1	Cluster	2	Cluster3	
Sty.	Individue	el Centrojod	Indivible	y lentod	Individual	l centros
1	2	(1,7)	13	(6,9)	17	(8,1)
2	1,2	(1,6)	13	(6,9)	17	(0.1)
3	1,2,3	(1.3,6)	313	(6,9)	17	(2,1)
4	1,2,3,4	(2,78,6,2)	13	(6,9)	17	(0,1)
5	1,2,3,4,5	(2.8, 6)	13	(6,9)	17	(8,1)
6	1,2,3,4,5,6	(2.83,6)	13	(66,9)	17	(8.1)
7	1,2,3,4,5,6,	7 (2.05,6.20)) 513	(6,9)	17	(0,1)
8	1,2,3,4,5,0	5, 205	13	(6,9)	17	(0,1)
	The state of the s			387.1		

6	1,2,3,4,5,6 (2.83,6)	13	(66,9)	17	(8.1)
7	1,2,3,4,5,6,7(2.05,6.20)	513	(6,9)	17	(8,1)
8	1,2,3,4,5,6,205	13	(6,9)	17	(Q,1)
	7,8 (2.876.62)				
9	1,2,3,4,5,6, (3,6,44)	13	(6,9)	17	(8,1)
	7,0,9				
10	1,2,3,4,5,6 (3.1)	13	(6,9)	17	(2,1)
	7,2,9,10				

11	1,2,3,4,5,6,	B-27,6-36) 13	(6,9)	17	(8,1)
	7,8,9,10,11					> '
12	1,2,3,4,5,6,2,	(3.41,6.41)				
	8,9,10,11,12					
13	1,2,3,4,5,6,7,	(341.6.41)	13	(6,9)	11/19	(7.5,1.5)
1,313	89,10,11,12	You have	No.	TO SEE FOR		
14	1,2,3,4,5,6,7,	(341,6.41)	13	(6,9)	10-14,15,	(7.33,2)
(5 8 8	8,9,10,11,12	(E19,		1000	17	
15	1,2,3,4,5,6,7	(3,41,6,41)	13,16	(6.5,9)	14,15,17	(7.33,2)
3.14	8,9,10,11,12			34.0		
16	1,2,3,4,5,6,7	(3.41,6.4)	13,16,18	(7,8,3)	14,15,17	(7.33,2)
	8,9,10,11,12	7 1		2 2 2		
25		Pan		8 14 3		
E N I		13. h		37.0		
So,		com	pare	lach u	indivi	dual's
4.2	distanq	do	its o	uen de	when a	2
	mean	and	to t	hall of	oppos	ite other
	cluster	8.				
		The Contract of				
		18.5				
		45				
		Acres Acres (Acres (Acr				

	1			
Individ	udl	Distance of	Distanado	Distance to
	Lulo	Centrold	Centroida	centroidal
	فيقيق	Clusters	cluster 2	auster 3.
		(3.41,6.41)	(7,03)	(7.33,2)
1		2.79	6.85	7
2	. 1.5	2.48	6.14	8,07
3	3,14	1.47	31. 5. 52 M. 8. 8	6.66
4	6.9	2.95	5.05	08.6
5	5 . 28	3.43	6.64	4.44
6		0.58	4.61	5.09
7		1069	4.01	7,40
8		2.62	4.06	8-23
9		1.53	4.46	4,48
10		1,7	3.01	6.86
()		2.8	4.74	3.07
12		1, 7	2/39	5.52
13		3.66	1.22	7.13
14		5-69	6.3	0.33
15		4.95	5.3	1.05
16		4.43	6.7	7.01
17		7.09	7,37	1/20
18		4.63	1.64	5,04

	Since,	att me veri	fied +	hat all
	the	soints are in	or corr	ect chuster.
		fore, Our	ferial	three
		ster are		
			13.64 5	
		Indjuidual	Cer	troid.
aust	ent 1	,2,3,4,5,6,7,8,9,10,11	12	83.41,6.41
Claus	The state of the s	13, 16, 18	2 P - Q	7,8-3
aust	er 3	14,15,17		7.33,2
	2			
	The b	usiet time u	chich v	ue observed
	are			
3 3	PTIn	der > 4,7,0		
and	Popula	r temes -s gar	-10an	
			n-3 bm	
21			m - 4 ps	
			Parson	
20			2 19.1	
			Style	
1283				