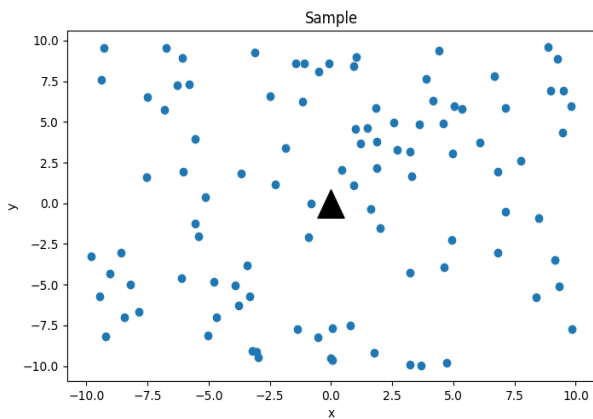
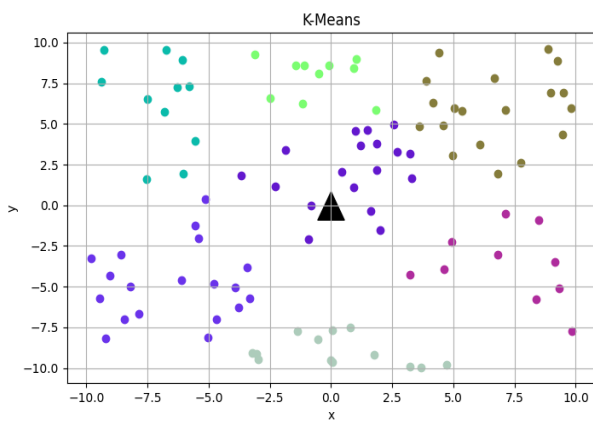


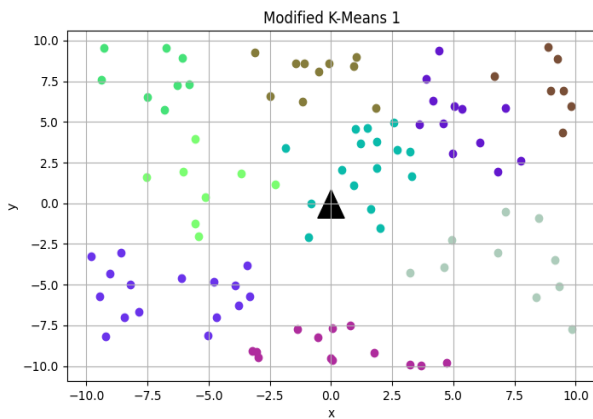
CLUSTER RESULT



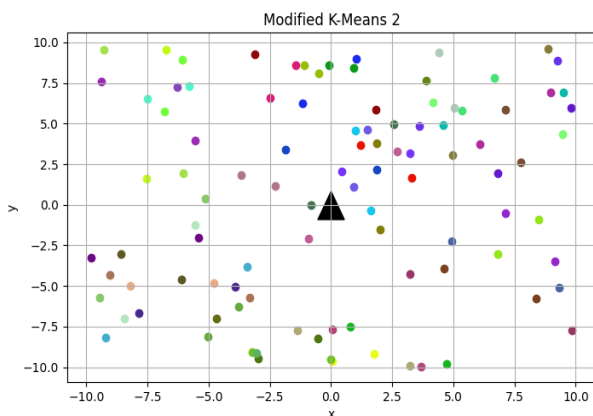
This Plot shows the position of users equipment represented as dots and base station represented as triangle.



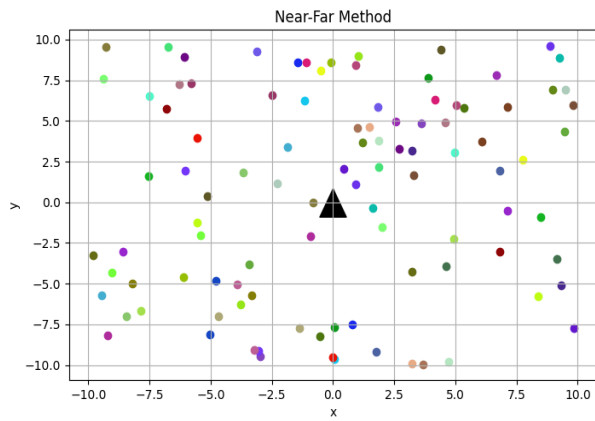
This Plot shows Form of Clusters created using K-Means Clustering. In this process, we use Silhouette Score to set the value of K. The colors represented clusters formed, total cluster formed are 7.



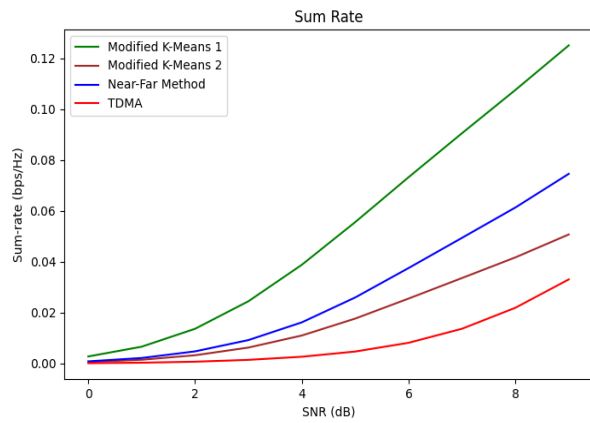
This Plot shows Form of Clusters created using Modified K-Means Clustering. In this process, we use Optimum distance on Silhouette Score to set the value of K. The colors represented clusters formed, total cluster formed are 9.



This Plot shows Form of Clusters created using Combination of K-Means Clustering and Near-Far Scheme. The colors represented clusters formed, total cluster formed are 52.



This Plot shows Form of Clusters created using Near-Far Method. The nearest user to the base station will be paired with the furthest. The colors represented clusters formed, total cluster formed are 50.



After some calculation, we obtained sume rate score for every clustering method, the best sum rate score goes to Modified K-Means 1.

Modified K-Means 1 delivers a better sum-rate score by 152.15 % over Modified K-Means 2.

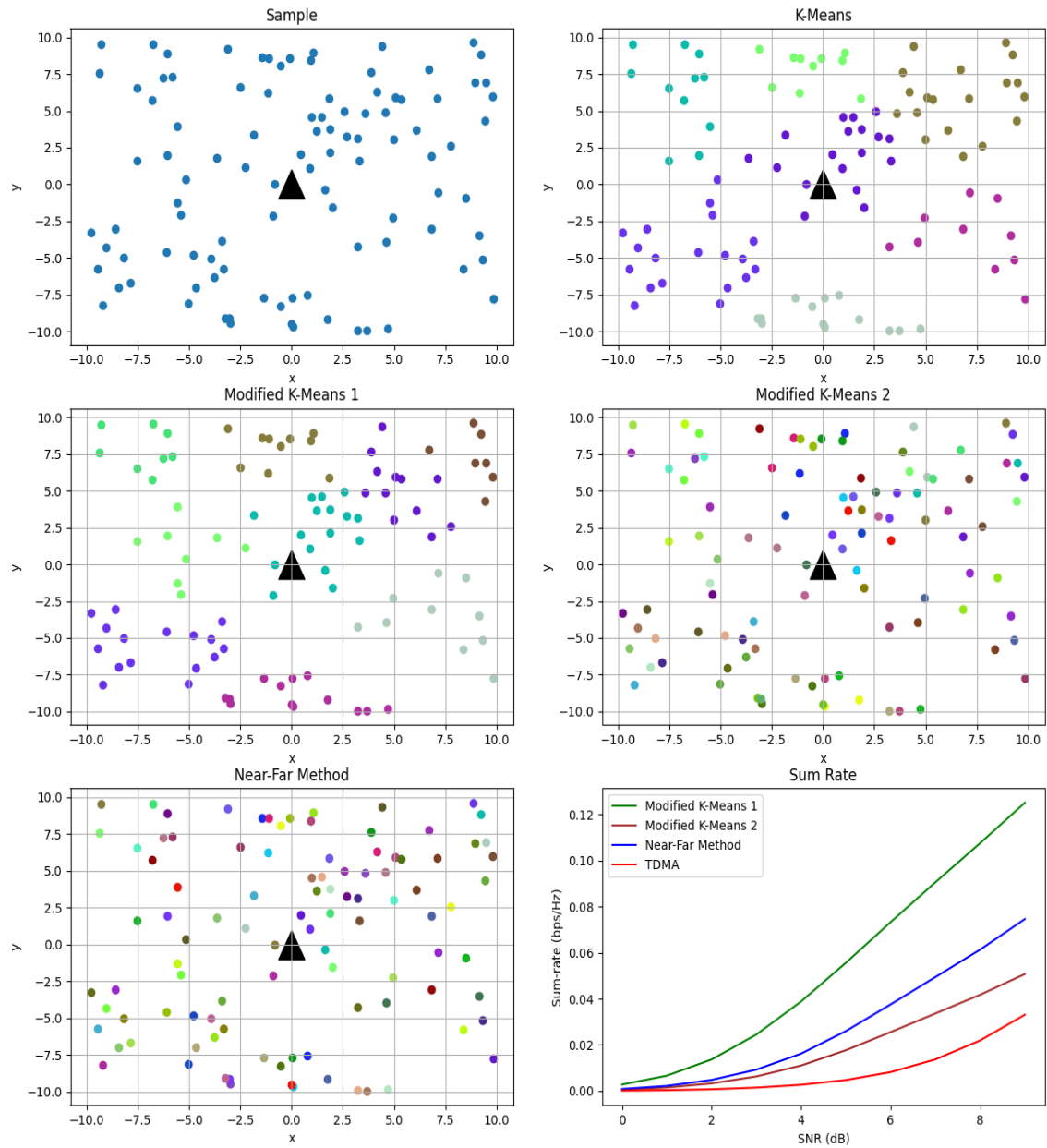
Modified K-Means 1 delivers a better sum-rate score by 71.53 % over Near-Far Method.

Modified K-Means 1 delivers a better sum-rate score by 334.53 % over OMA.

Modified K-Means 2 delivers a worse sum-rate score by 31.97 % over Near-Far Method.

Modified K-Means 2 delivers a better sum-rate score by 71.92 % over OMA.

SIDE-BY-SIDE GRAPH



CLUSTER MAPPING TABLE

This information shows which cluster are the users at, in every clustering method.

X	Y	Distance	Near-Far	Modified 2	Modified 1
4.96	3.05	5.82	24	0	3
8.88	9.63	13.1	1	0	8
3.6	4.86	6.05	25	1	3
9.24	8.86	12.8	2	1	8
4.57	4.9	6.7	32	2	3
9.49	6.94	11.76	6	2	8
6.82	1.92	7.09	36	3	3
9.81	5.99	11.49	8	3	8
6.09	3.71	7.13	37	4	3
8.96	6.91	11.32	9	4	8
4.18	6.32	7.58	42	5	3
9.45	4.33	10.39	17	5	8
5.05	5.94	7.8	46	6	3
4.41	9.39	10.37	18	6	3
5.35	5.82	7.91	48	7	3
6.68	7.79	10.26	21	7	8
7.77	2.61	8.2	49	8	3
7.12	5.86	9.22	37	8	3
3.88	7.65	8.58	44	9	3
-3.42	-3.84	5.14	17	10	1
-9.21	-8.2	12.33	4	10	1
-5.15	0.37	5.16	18	11	5
-9.46	-5.72	11.05	10	11	1
-5.55	-1.27	5.69	22	12	5
-8.45	-6.98	10.96	11	12	1
-5.4	-2.05	5.78	23	13	5
-9.8	-3.28	10.33	19	13	1
-3.93	-5.05	6.4	30	14	1
-7.86	-6.68	10.32	20	14	1
-3.31	-5.72	6.61	31	15	1
-9.05	-4.3	10.02	23	15	1
-4.8	-4.82	6.8	33	16	1
-8.2	-5.01	9.61	31	16	1
-3.77	-6.29	7.33	39	17	1
-5.03	-8.1	9.53	33	17	1
-6.12	-4.58	7.64	43	18	1
-8.58	-3.03	9.1	38	18	1
-4.68	-7.02	8.44	47	19	1
-6.05	1.96	6.36	29	20	5
-9.29	9.53	13.31	0	20	7
-5.55	3.93	6.8	34	21	5
-9.39	7.58	12.07	5	21	7
-7.54	1.6	7.71	45	22	5
-6.75	9.55	11.69	7	22	7
-6.8	5.75	8.91	40	23	7
-6.07	8.91	10.78	13	23	7
-5.8	7.33	9.35	35	24	7
-7.52	6.54	9.97	24	24	7
-6.27	7.25	9.59	32	25	7
-0.81	0.0	0.81	0	26	2
2.57	4.97	5.6	21	26	2
0.91	1.08	1.41	1	27	2