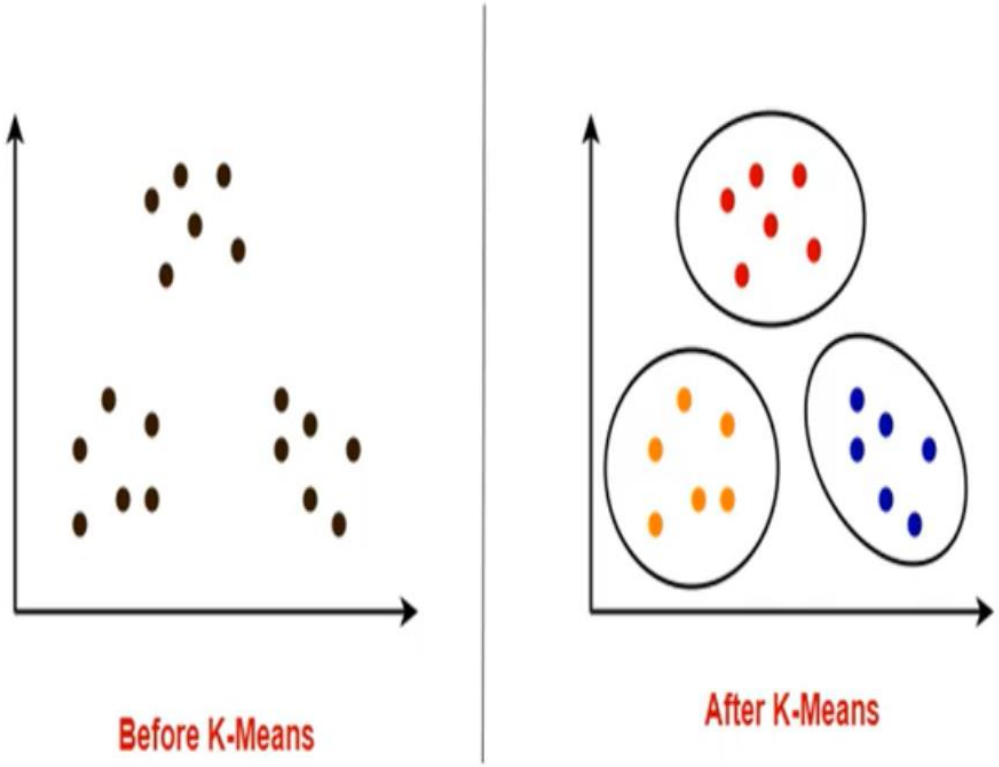
K-Means Clustering



Before K-Means

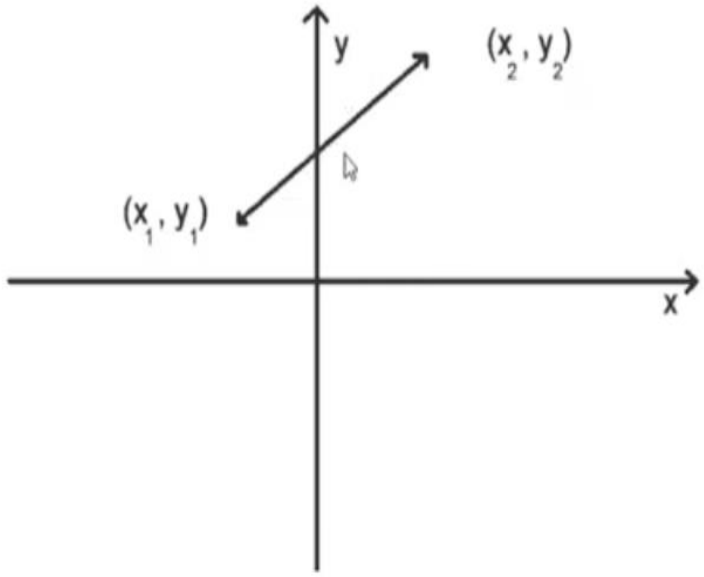
After K-Means

K-Means Clustering

- Algorithm (KMeans)
- Metrics
    1. Euclidean Distance
    2. Manhattan Distance
- Elbow method

K-Means Clustering

$$d=\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$



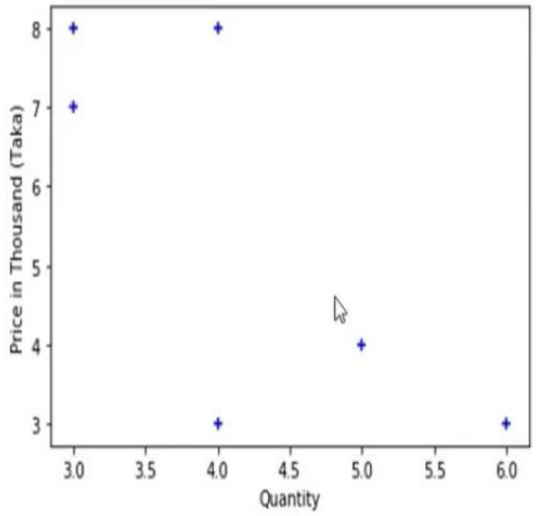
Euclidean Distance

K-Means Clustering

Scatter Plot

```
In [6]: plt.xlabel('Quantity')
        plt.ylabel('Price in Thousand (Taka)')
        plt.scatter(dataframe['Quantity'], dataframe['Price(K)'],marker='+',color='blue')
```

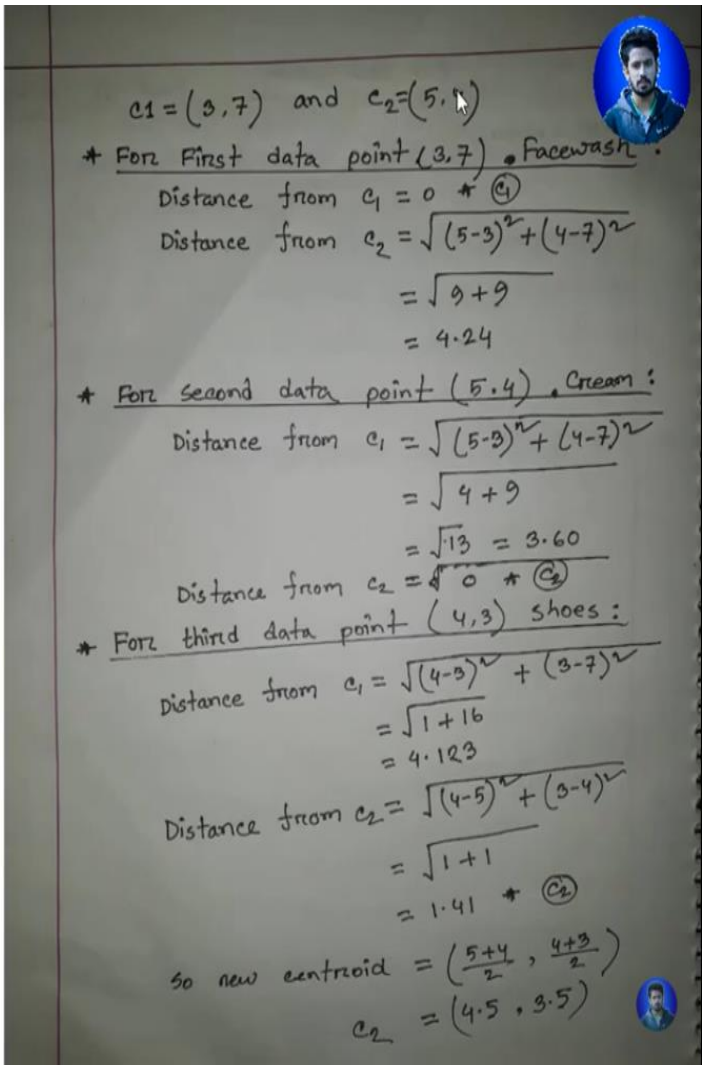
```
Out[6]: <matplotlib.collections.PathCollection at 0x2a9e524a048>
```



In [ ]:

K-Means Clustering

	A	B	C
1	Products	Quantity	Price(K)
2	FaceWash	3	7
3	Cream	5	4
4	Shoes	4	3
5	Bags	4	8
6	Jacket	6	3
7	Shirt	3	8
8			
9			



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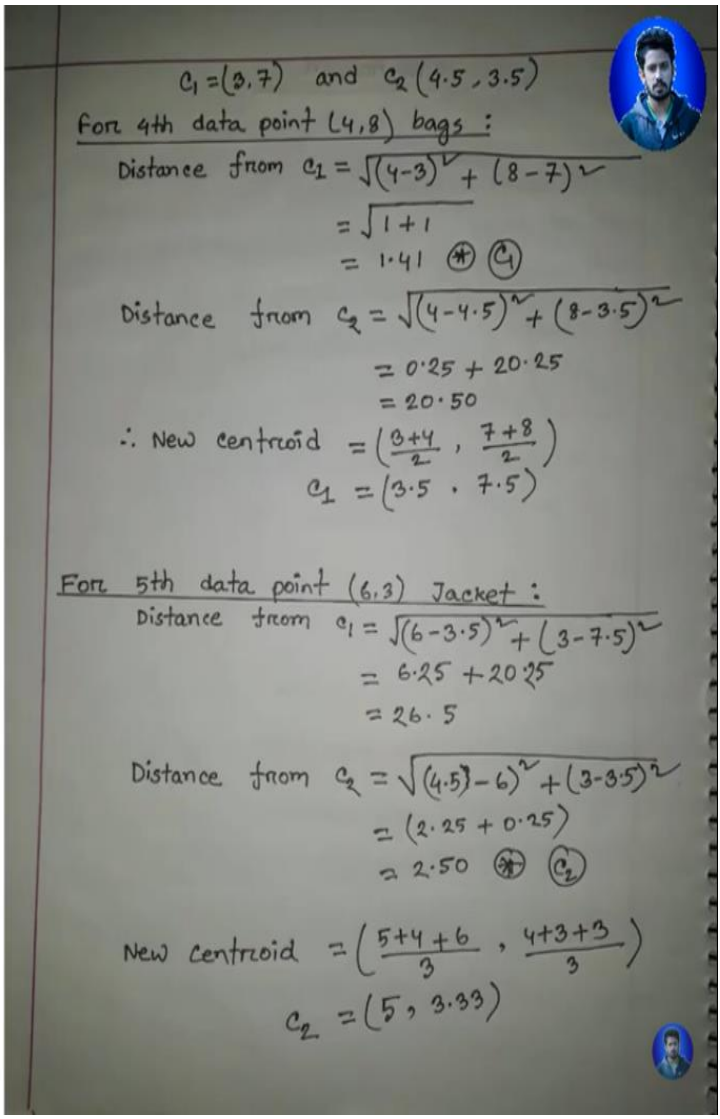

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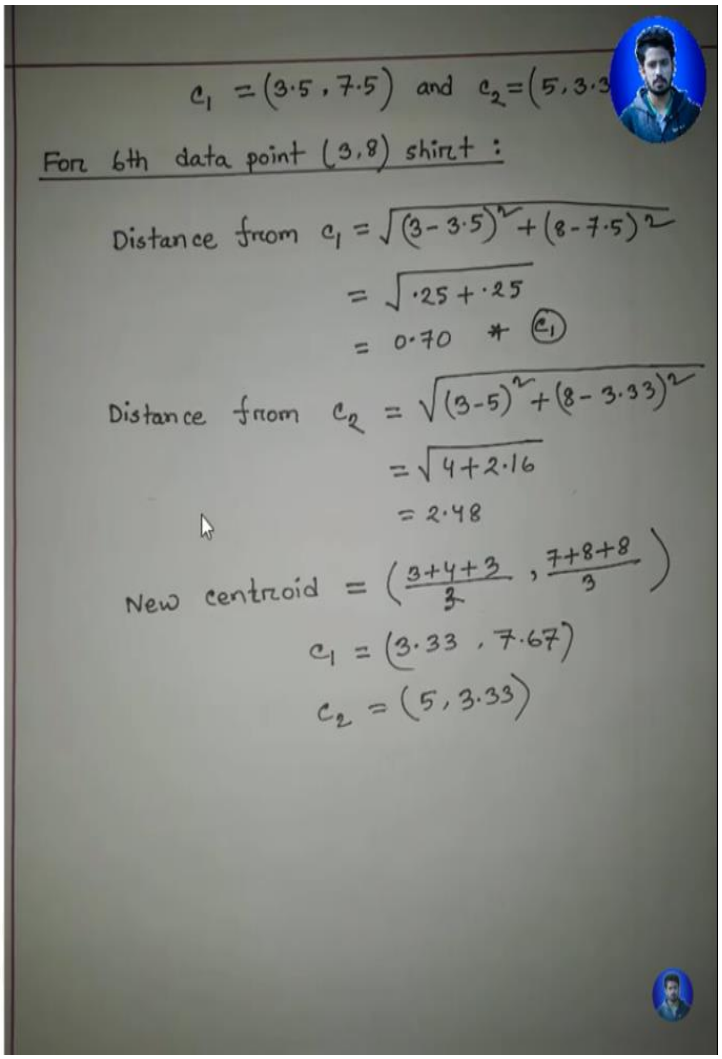
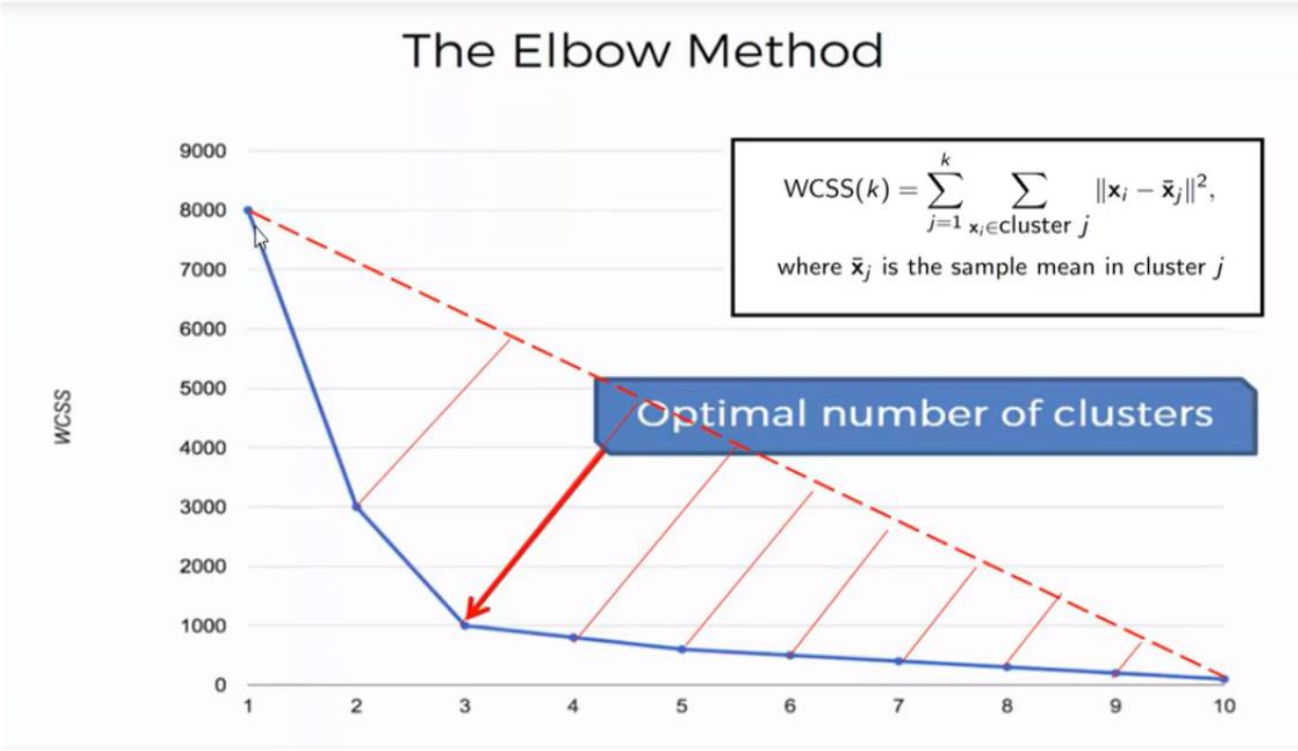


K-Means Clustering



Zhom