Please follow the below steps to complete the project (60 points)

1. Read the dataset and understand the features and target variable. 4 points
2. Encode independent features. 4 points
3. Separate the dependant variable from the rest of the train data 2 point
4. Split the dataset into training and test data (Take 80:20 ratio). 2 points
5. Apply PCA on the independent features of train data. 2 point
6. Display elbow plot to find out reduced number of dimensions (which covers more than 95% of the variance). 6 points
7. Transform the data using PCA (select optimum number of PCs). 4 points
8. Apply KMeans algorithm on the above transformed data. 6 points
9. Select optimal number of clusters and form clusters out of the train data. 10 points
10. Create a new column in the train data and populate it with the cluster labels. 4 points
11. Transform the test data using the same PCA object that was fit on the train data. 4 points
12. Use the same kmeans object, assign cluster labels to the test data and store it as a feature. 4 points
13. Apply SVC model on train dataset and predict target for test dataset. 6 points
14. Check accuracy and confusion matrix. 2 point