- 1. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build logistic regression model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifiers and write your observations.
 - g. Identify the best estimator.
- 2. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Naïve Bayes model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifiers and write your observations.
 - **g.** Identify the best estimator.
- 3. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build SVM model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - **e.** Draw ROC curve for any two class.
 - **f.** Compare with any other two classifiers and write your observations.
 - **g.** Identify the best estimator.
- 4. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Decision tree model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifiers and write your observations.
 - g. Identify the best estimator.
- 5. Import load_diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Naïve Bayes model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - g. Identify the best estimator.

- 6. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Logistic model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - g. Identify the best estimator.
- 7. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build SVM model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - **g.** Identify the best estimator.
- 8. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Decision Tree model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - **e.** Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - **g.** Identify the best estimator.
- 9. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Ensemble model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - **g.** Identify the best estimator.
- 10. Import load digits from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build SVM model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - **g.** Identify the best estimator.

- 11. Import load digits from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build Logistic Regression model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve for any two class.
 - **f.** Compare with any other two classifier and write your observations.
 - g. Identify the best estimator.

12. Import load digits from sklearn and perform the following tasks

- a. Perform feature selection.
- b. Build Naïve Bayes model using variables that were narrowed down in step (a).
- **c.** Measure the accuracy of the model.
- **d.** Draw a table for all the metrics.
- e. Draw ROC curve for any two class.
- **f.** Compare with any other two classifier and write your observations.
- **g.** Identify the best estimator.

13. Import load wine from sklearn and perform the following tasks

- a. Perform feature selection.
- b. Build SVM model decision tree using variables that were narrowed down in step (a).
- **c.** Measure the accuracy of the model.
- **d.** Draw a table for all the metrics.
- **e.** Draw ROC curve for any two class.
- f. Compare with any other two classifiers and write your observations.
- **g.** Identify the best estimator.

14. Import load wine from sklearn and perform the following tasks

- a. Perform feature selection.
- b. Build model using ensemble learning using variables that were narrowed down in step (a)
- **c.** Measure the accuracy of the model.
- **d.** Draw a table for all the metrics.
- **e.** Draw ROC curve for any two class.
- **f.** Compare with any other two classifier and write your observations.
- **g.** Identify the best estimator.

15. Import load breast cancer from sklearn and perform the following tasks

- a. Perform feature selection.
- b. .Build logistic regression model using variables that were narrowed down in step (a).
- **c.** Measure the accuracy of the model.
- **d.** Draw a table for all the metrics.
- **e.** Draw ROC curve.
- **f.** Compare with any other two classifier and write your observations

- 16. Import load breast cancer from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Build SVM model using variables that were narrowed down in step (a).
 - **c.** Measure the accuracy of the model.
 - **d.** Draw a table for all the metrics.
 - e. Draw ROC curve.
 - f. Compare with any other two classifier and write your observations
- 17. Import load_bostonfrom sklearn and perform the following tasks
 - a) Perform feature selection
 - b) Build linear regression model using variables that were narrowed down in step (a).
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator
- 18. Import <u>load boston</u> from sklearn and perform the following tasks
 - a) Perform feature selection
 - b) Build LASSO, RIDGE model using variables that were narrowed down in step (a).
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator
- 19. Import <u>load_boston</u> from sklearn and perform the following tasks
 - a) Perform feature selection
 - b) Build Gradieant, Polynomial model using variables that were narrowed down in step (a).
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator
- 20. Import <u>load linnerud</u> from sklearn and perform the following tasks
 - a) Perform feature selection
 - **b**) Build linear regression model using variables that were narrowed down in step (a)..
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator.
- 21. Import load linnerud from sklearn and perform the following tasks
 - a) Perform feature selection
 - **b)** Build Lasso and Ridge model using variables that were narrowed down in step (a).
 - c) Draw a table for all the metrics.
 - **d**) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator.

- 22. Import load linnerud from sklearn and perform the following tasks
 - a) Perform feature selection
 - **b**) Build Polynomial and Gradient Descent model using variables that were narrowed down in step (a)..
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - **e**) Identify the best estimator.
- 23. Import load breast cancerfrom sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using K-Means Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw elbow plot and from that figure out optimal value of k.
- 24. Import <u>load</u> <u>diabetes</u> from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using KMeans Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw elbow plot and from that figure out optimal value of k.
- 25. Import load breast cancerfrom sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using Hierarchical algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw dendogram for different linkage methodslike single (min), complete (max), wardand from that figure out the number of clusters.
 - e. Draw a comparision table on different linkage metrics.
- 26. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using KMeans Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw elbow plot and from that figure out optimal value of k.
- 27. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using Hierarchical algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw dendogram for different linkage methodslike single (min), complete (max), wardand from that figure out the number of clusters.
 - e. Draw a comparision table on different linkage metrics.

- 28. Import load iris from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using Hierarchical algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw dendogram for different linkage methodslike single (min), complete (max), wardand from that figure out the number of clusters.
 - e. Draw a comparision table on different linkage metrics.
- 29. Import load breast cancerfrom sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using DBSCAN Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw knee plot and from that figure out optimal value of epsilon and minimum point.
- 30. Import load diabetes from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using DBSCAN Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw knee plot and from that figure out optimal value of epsilon and minimum point.
- 31. Import <u>load Iris</u> from sklearn and perform the following tasks
 - a. Perform feature selection.
 - a. Form clusters using DBSCAN Algorithm.
 - b. Figure out if any preprocessing such as scaling would help.
 - c. Draw knee plot and from that figure out optimal value of epsilon and minimum point.
- 32. Import <u>load_boston</u> from sklearn and perform the following tasks
 - a) Perform feature selection
 - **b)** Build gradient descent model without using inbuilt method.
 - c) Draw a table for all the metrics.
 - **d)** Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator
- 33. Import **load boston** from sklearn and perform the following tasks
 - a) Perform feature selection
 - **b)** Build gradient descent model without using inbuilt method.
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator

- 34. Import <u>load boston</u> from sklearn and perform the following tasks
 - a) Perform feature selection
 - b) Build gradient descent model without using inbuilt method.
 - c) Draw a table for all the metrics.
 - d) Compare with any other two regression algorithms and write your observations
 - e) Identify the best estimator
- 35. Import load wine from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using DBSCAN Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw knee plot and from that figure out optimal value of epsilon and minimum point.
- 36. Import load wine from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using K-means Algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw Elbow plot and from that figure out optimal k.
- 37. Import load wine from sklearn and perform the following tasks
 - a. Perform feature selection.
 - b. Form clusters using Hierarchical algorithm.
 - c. Figure out if any preprocessing such as scaling would help.
 - d. Draw dendogram for different linkage methodslike single (min), complete (max), wardand from that figure out the number of clusters.
 - e. Draw a comparision table on different linkage metrics.