- ***Problem Statement 1:*** (Compulsory both the program to execute)

- ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

- ***Use abelone dataset. Split the data set into Training Data set and Test Data set.***
  a. Perform linear regression analysis with Least Squares Method.
  b. Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.
  c. Verify the Effect of Data Set Size and Bias-Variance Tradeoff.
  d. Describe your findings in each case

- ***Problem Statement 2:*** (Compulsory both the program to execute)

- ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

- ***Create Association Rules for the Market Basket Analysis for the given Threshold. (Using R) dataset : retail***

- ***Problem Statement 3:*** (Compulsory both the program to execute)

- ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

- ***Implement K-Means algorithm for clustering to create a Cluster on the given data.(Using Python) dataset :iris***

- ***Problem Statement 4:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

  - ***Implement SVM for performing classification and find its accuracy on the given data. (Using Python) dataset : Wine***

- ***Problem Statement 5:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

  - ***Creating & Visualizing Neural Network for the given data. (Using Python) dataset: wine***

- ***Problem Statement 6:*** (Compulsory both the program to execute)

  - ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

  - ***Implement K-Means algorithm for clustering to create a Cluster on the given data.(Using Python)dataset : wine(cluster)***

- ***Problem Statement 7:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

  - ***Implement SVM for performing classification and find its accuracy on the given data. (Using Python) dataset: Boston***

- ***Problem Statement 8:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

  - ***Creating & Visualizing Neural Network for the given data. (Using Python) dataset: Boston***

- ***Problem Statement 9:*** (Compulsory both the program to execute)

  - ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

  - ***On the given data perform the performance measurements using Simple Naïve Bayes algorithm such as Accuracy, Error rate, precision, Recall, TPR,FPR,TNR,FPR etc. (Using Weka API through JAVA) dataset : diabetes***

- ***Problem Statement 10:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

  - ***Principal Component Analysis -Finding Principal Components, Variance and Standard Deviation calculations of principal components.(Using R)dataset: wine***

- ***Problem Statement 11:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

  - ***Principal Component Analysis -Finding Principal Components, Variance and Standard Deviation calculations of principal components.(Using R) dataset :diabetes***

- ***Problem Statement 12:*** (Compulsory both the program to execute)

  - ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

  - ***On the given data perform the performance measurements using Simple Naïve Bayes algorithm such as Accuracy, Error rate, precision, Recall, TPR,FPR,TNR,FPR etc. (Using Weka API through JAVA) dataset : iris***

- ***Problem Statement 13:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

  - ***Creating & Visualizing Neural Network for the given data. (Using Python) dataset: Wine***

- ***Problem Statement 14:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

  - ***Implement SVM for performing classification and find its accuracy on the given data. (Using Python) dataset: diabetes***

- ***Problem Statement 15:*** (Compulsory both the program to execute)

  - ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

  - ***Implement K-Means algorithm for clustering to create a Cluster on the given data.(Using Python)dataset : breast dataset***

- ***Problem Statement 16:*** (Compulsory both the program to execute)

  - ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

  - ***Creating & Visualizing Neural Network for the given data. (Using Python) dataset: diabetes***

- ***Problem Statement 17:*** (Compulsory both the program to execute)

➢ ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

➢ ***Implement SVM for performing classification and find its accuracy on the given data. (Using Python) dataset : diabetes***

- ***Problem Statement 18:*** (Compulsory both the program to execute)

➢ ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

➢ ***Implement K-Means algorithm for clustering to create a Cluster on the given data.(Using Python) dataset :breast cancer***

- ***Problem Statement 19:*** (Compulsory both the program to execute)

➢ ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

➢ ***Create Association Rules for the Market Basket Analysis for the given Threshold. (Using R) dataset : retail***

- ***Problem Statement 20:*** (Compulsory both the program to execute)

➢ ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

➢ ***Use abelone dataset. Split the data set into Training Data set and Test Data set.***
   a. Perform linear regression analysis with Least Squares Method.
   b. Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.
   c. Apply Cross Validation and plot the graphs for errors.
   d. Describe your findings in each case

- ***Problem Statement 21:*** (Compulsory both the program to execute)

- ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

- ***Use abelone dataset. Split the data set into Training Data set and Test Data set.***
  a. ***Perform linear regression analysis with Least Squares Method.***
  b. ***Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.***
  c. ***Apply Subset Selection Method and plot the graphs for errors.***
  d. ***Describe your findings in each case***

- ***Problem Statement 22:*** (Compulsory both the program to execute)

- ***Write a program in C++ or java to implement SHA1 algorithm using libraries (API)***

- ***Use abelone dataset. Split the data set into Training Data set and Test Data set.***
  a. ***Perform linear regression analysis with Least Squares Method.***
  b. ***Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.***
  c. ***Apply Subset Selection Method and plot the graphs for errors.***
  d. ***Describe your findings in each case***

- ***Problem Statement 23:*** (Compulsory both the program to execute)

- ***Develop and program in C++ or Java based on number theory such as Chinese remainder***

- ***Use Air Quality dataset. Split the data set into Training Data set and Test Data set.***
  a. ***Perform linear regression analysis with Least Squares Method.***
  b. ***Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.***
  c. ***Verify the Effect of Data Set Size and Bias-Variance Tradeoff.***
  d. ***Describe your findings in each case***

- ***Problem Statement 24:*** (Compulsory both the program to execute)

➢ ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

➢ ***Use Air Quality dataset. Split the data set into Training Data set and Test Data set.***

a. ***Perform linear regression analysis with Least Squares Method.***
b. ***Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.***
c. ***Apply Cross Validation and plot the graphs for errors.***
d. ***Describe your findings in each case***

- ***Problem Statement 25:*** (Compulsory both the program to execute)

➢ ***Write a program in C++ or Java to implement RSA algorithm for key generation and cipher verification.***

➢ ***Use Air Quality dataset. Split the data set into Training Data set and Test Data set.***

a. ***Perform linear regression analysis with Least Squares Method.***
b. ***Plot the graphs for Training MSE and Test MSE and comment on Curve Fitting and Generalization Error.***
c. ***Apply Subset Selection Method and plot the graphs for errors.***
d. ***Describe your findings in each case***