Scenario 1:

1. Machine learning – Supervised Learning – Regression
2. Collect the data:  Collect the data such as square footage, number of bedrooms, location, house price
3. Pre process the collected data: location is the categorical data so preprocess using one hot encoding
4. Split input and output data: square footage, number of bedrooms, location are input House price as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Multiple Regression, DT, RF, SVM algorithms using training set data.
7. Evaluate the model: Evaluate the model using R2_score.
8. Saved the model: Save the best model.
9. Prediction: Predict the house price value using the created model.

Scenario 2:

1. Machine learning – Supervised Learning – Classification
2. Collect the data: Collect the data such as customer spending behaviour and transaction history
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data customer spending behaviour and transaction history  are input Fraudulent transactions is output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Logistic Regression, DT, RF, SVM, KNN and algorithms using training set data.
7. Evaluate the model: Evaluate the model using Accuracy, Recall, Precision and F1 score values.
8. Saved the model: Save the best model.
9. Prediction: Predict the transaction is Fraud or Not.

Scenario 3:

1. Machine learning – Un-Supervised Learning – Clustering
2. Collect the data: Collect the data such as customer shopping pattern
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Choose the algorithm: Create model by K- Means, DBScan, Affinity Progpagation,MeanShift etc
5. Using Elbow method predict the no of clusters.
6. Create the model and get the cluster groups.
7. Plot the data and get the cluster data for market analysis.

Scenario 4:

1. Machine learning – Supervised Learning – Regression
2. Collect the data:  Collect the data such as years of experience, job title, and education level
3. Pre process the collected data: Preprocess the categorical data such as job title, education level

4. Split input and output data: years of experience, job title, and education level are input Salary as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Multiple Regression, DT, RF, SVM algorithms using training set data.
7. Evaluate the model: Evaluate the model using R2_score.
8. Saved the model: Save the best model.
9. Prediction: Predict the Salary using the created model.

Scenario 5:

1. Machine learning – Supervised Learning – Classification
2. Collect the data: Collect the data such as content and sender details.
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data content and sender details are input Spam or not spam as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Logistic Regression, DT, RF, SVM, KNN and algorithms using training set data.
7. Evaluate the model: Evaluate the model using Accuracy, Recall, Precision and F1 score values.
8. Saved the model: Save the best model.
9. Prediction: Predict the transaction is Spam or Not Spam.

Scenario 6:

1. Machine learning – Supervised Learning – Classification
2. Collect the data: Collect the data such as customer review on the products.
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data customer review on the product as input Positive or negative as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Logistic Regression, DT, RF, SVM, KNN and algorithms using training set data.
7. Evaluate the model: Evaluate the model using Accuracy, Recall, Precision and F1 score values.
8. Saved the model: Save the best model.
9. Prediction: Predict the transaction is Positive  or Negative.

Scenario 7:

1. Machine learning – Supervised Learning – Classification
2. Collect the data: Collect the data such as customer driving history and demographics.
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data customer driving history and demographics as input Claim or not as  output data
5. Split the Training and Test set data:

6. Choose the algorithm: Create model by Logistic Regression, DT, RF, SVM, KNN and algorithms using training set data.
7. Evaluate the model: Evaluate the model using Accuracy, Recall, Precision and F1 score values.
8. Saved the model: Save the best model.
9. Prediction: Predict the transaction is Claim or Not.

Scenario 8:

1. Machine learning – Un-Supervised Learning – Clustering
2. Collect the data: Collect the data such as customer viewing preferences and watch history
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Choose the algorithm: Create model by K- Means, DBScan, Affinity Progpagation,MeanShift etc
5. Using Elbow method predict the no of clusters.
6. Create the model and get the cluster groups.
7. Plot the data and get the cluster data for market analysis.

Scenario 9:

1. Machine learning – Supervised Learning – Regression
2. Collect the data:  Collect the data such as age, medical history, and lifestyle habits
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data: age, medical history, and lifestyle habits are input Recovery time as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Multiple Regression, DT, RF, SVM algorithms using training set data.
7. Evaluate the model: Evaluate the model using R2_score.
8. Saved the model: Save the best model.
9. Prediction: Predict the recovery time using the created model.

Scenario 10:

1. Machine learning – Supervised Learning – Regression
2. Collect the data:  Collect the data such as study hours, attendance, and past academic performance
3. Pre process the collected data: Preprocess the collected data such as missing data using encoding, preprocess the categorical data.
4. Split input and output data: study hours, attendance are input , academic performance score as output data
5. Split the Training and Test set data:
6. Choose the algorithm: Create model by Multiple Regression, DT, RF, SVM algorithms using training set data.
7. Evaluate the model: Evaluate the model using R2_score.
8. Saved the model: Save the best model.
9. Prediction: Predict the final score using the created model