Introduction (5 points)

- **Expectations**:
    - **Context and Background**: Clearly present the problem or research question being addressed.
    - **Objectives**: State the specific goals of the project.
    - **Dataset Description**: Provide an overview of the dataset(s) being used, including sources and any relevant attributes.
    - **Structure**: Outline the structure of the report.

Exploratory Data Analysis (10 points)

- **Expectations**:
    - **Data Cleaning**: Discuss any steps taken to clean and preprocess the data.
    - **Descriptive Statistics**: Provide summary statistics of key variables.
    - **Visualizations**: Use appropriate visualizations (e.g., histograms, and scatter plots) to explore data distributions and relationships.
    - **Insights**: Highlight key insights gained from the exploratory analysis.

Clustering (15 points)

- **Expectations**:
    - **Method Selection**: Justify the choice of clustering method(s) used.
    - **Implementation**: Clearly explain the implementation process, including any preprocessing or parameter selection.
    - **Results**: Present the clustering results using visualizations and/or tables.
    - **Interpretation**: Discuss the meaning of the clusters and any patterns observed.

Models: Fitting and Interpretation (30 points)

- **Expectations**:
    - **Model Selection**: Justify the choice of models used for fitting.
    - **Implementation**: Clearly explain the implementation process for each model, including data splits, parameter selection, and any preprocessing steps.
    - **Interpretation of Coefficients/Features**: Provide a detailed interpretation of the model coefficients or important features.
    - **Comparison of Models**: Compare different models based on fitting and interpret their differences.

Models: Predictions (15 points)

- **Expectations**:

    - **Prediction Accuracy**: Evaluate the accuracy of predictions made by the models.
    - **Prediction Process**: Clearly explain the process of making predictions with each model.
    - **Visualizations**: Use appropriate visualizations to present the predictions (e.g., predicted vs. actual values).
    - **Examples**: Provide examples of predictions for specific instances and discuss their accuracy.

Models: Performance and Validation (25 points)

- **Expectations**:
    - **Performance Metrics**: Use appropriate metrics (e.g., RMSE, R^2, precision, recall, F1 score) to evaluate model performance.
    - **Validation Techniques**: Explain and implement validation techniques (e.g., cross-validation, train/test split) to assess model generalizability.
    - **Comparison of Performance**: Compare the performance of different models based on the chosen metrics.
    - **Discussion of Results**: Discuss the strengths and weaknesses of each model based on the performance results and validation.