**Detailed Steps for Each Phase:**

**Project Setup:**

1**. Data Preparation:**

**Load the Dataset:**

* Load the dataset into an SQL database using a script or tool like pgAdmin.

**Data Cleaning:**

* Write a script to handle missing values, normalize numerical features, and encode categorical variables.

**Data Exploration:**

- Use pandas, seaborn, and matplotlib for EDA.

- Visualize the data distributions and relationships.

**2. Model Implementation:**

**Retrieve Data from SQL:**

* Write a script to connect to the SQL database and retrieve the data.
* Use SQLAlchemy for database connection.

**Train Models:**

* Implement Linear Regression, Random Forest Regressor, and Gradient Boosting Regressor in a script.
* Split the data into training and testing sets.
* Train the models and evaluate their performance.

**3. Model Optimization:**

**Hyperparameter Tuning:**

* Use GridSearchCV for hyperparameter tuning.
* Document the hyperparameters and results in a CSV file.

**4. Final Model and Evaluation:**

**Select the Best Model:**

* Compare the models based on evaluation metrics.
* Select the best-performing model.
* Print/Display Model Performance:
* Ensure the final script prints or displays the model performance metrics.

**5. Last task to complete is the detailed ReadMe file and PowerPoint**

**Questions-**

1. What are the primary factors affecting house prices in the UK?
2. Can we accurately predict house prices based on these factors?
3. How do different types of properties (like Detached, Semi-Detached, Terraced, Flats) affect average house prices?
4. What trends can be observed in UK house prices over time?
5. How do regional differences impact house prices in the UK?
6. What is the effect of sales volume on house prices?
7. How can we optimize machine learning models to improve prediction accuracy?
8. What are the challenges and limitations in predicting house prices using machine learning?
9. How well do our models perform compared to existing benchmarks or previous studies?