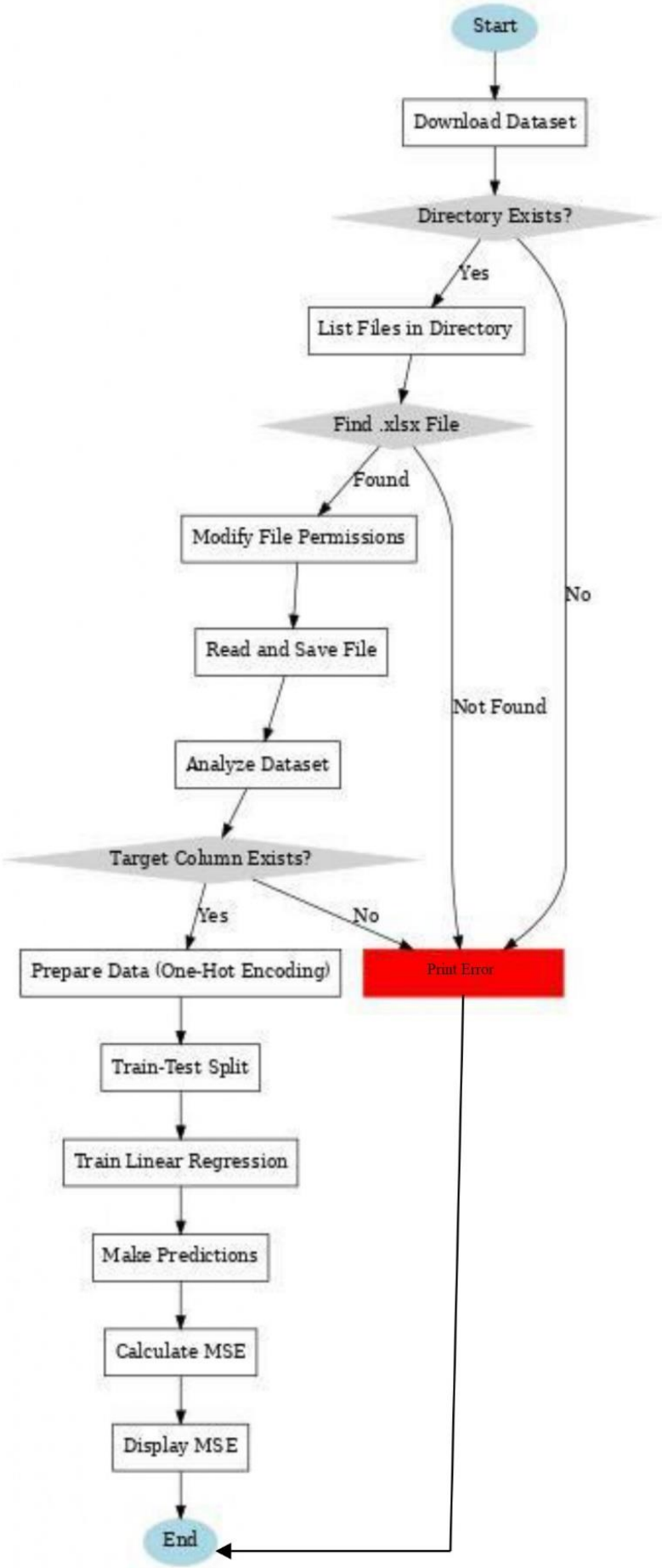
Algorithm

1. **Download Dataset:**
   - Use `kagglehub` to download the dataset.
   - Save the dataset's path.
2. **Verify Dataset Directory:**
   - Check if the directory exists.
   - If it does, list all files.
3. **Identify Dataset File:**
   - Search for `.xlsx` files in the dataset directory.
   - Select the first matching file.
4. **Modify File Permissions:**
   - Attempt to change file permissions to read-write for all.
   - Handle any `PermissionError`.
5. **Process the File:**
   - Read the `.xlsx` file into a DataFrame (limit rows to 200).
   - Save it as `For_prediction.csv`.
6. **Analyze Dataset:**
   - Open and load `For_prediction.csv`.
   - Determine dataset statistics:
     - Rows and columns count.
     - Unique classes in the last column.
     - Name of the last column.
7. **Linear Regression Prediction:**
   - Check if `TotalSalesValue` is present in the dataset.
   - Separate features (X) and target (y).
   - Convert non-numeric features to numeric using one-hot encoding.
   - Split the data into training and testing sets.
   - Train a linear regression model.
   - Make predictions and compute Mean Squared Error (MSE).
   - Display the MSE.
8. **Handle Errors:**
   - Manage exceptions at every critical step.

FLOWCHART


Start
Download Dataset
Directory Exists?
Yes
No
List Files in Directory
Find .xlsx File
Found
Not Found
Modify File Permissions
Read and Save File
Analyze Dataset
Target Column Exists?
Yes
No
Prepare Data (One-Hot Encoding)
Print Error
Train-Test Split
Train Linear Regression
Make Predictions
Calculate MSE
Display MSE
End