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Roll: 08

Batch: B1

DWDM ASSIGNMENT 06

Code:

import pandas as pd

from mlxtend.frequent\_patterns import apriori, association\_rules

try:

    # Load dataset from a local file (replace with your file path)

    file\_path = "C:\\Users\\ruchi\\OneDrive\\Desktop\\3rd year\\DWDM\\assignment6\\Book2.xlsx"  # Update this path accordingly

    df = pd.read\_excel(file\_path)

    # Display the dataset

    print("Dataset:")

    print(df)

    # Preprocessing: Create a binary matrix for categorical data

    # Convert categorical columns to binary/one-hot encoding

    df\_encoded = pd.get\_dummies(df[['Brand', 'Screen Size', 'Resolution', 'Aspect Ratio']])

    # Display the preprocessed data

    print("\nPreprocessed Dataset:")

    print(df\_encoded.head())

    # Applying the Apriori algorithm

    frequent\_itemsets = apriori(df\_encoded, min\_support=0.2, use\_colnames=True)

    # Generating association rules from frequent itemsets

    rules = association\_rules(frequent\_itemsets, metric="confidence", min\_threshold=0.6)

    # Display the frequent itemsets

    print("\nFrequent Itemsets:")

    print(frequent\_itemsets)

    # Display the association rules

    print("\nAssociation Rules:")

    print(rules[['antecedents', 'consequents', 'support', 'confidence']])

except ModuleNotFoundError as e:

    print(f"ModuleNotFoundError: {e}. Please install the required module by running: pip install mlxtend")

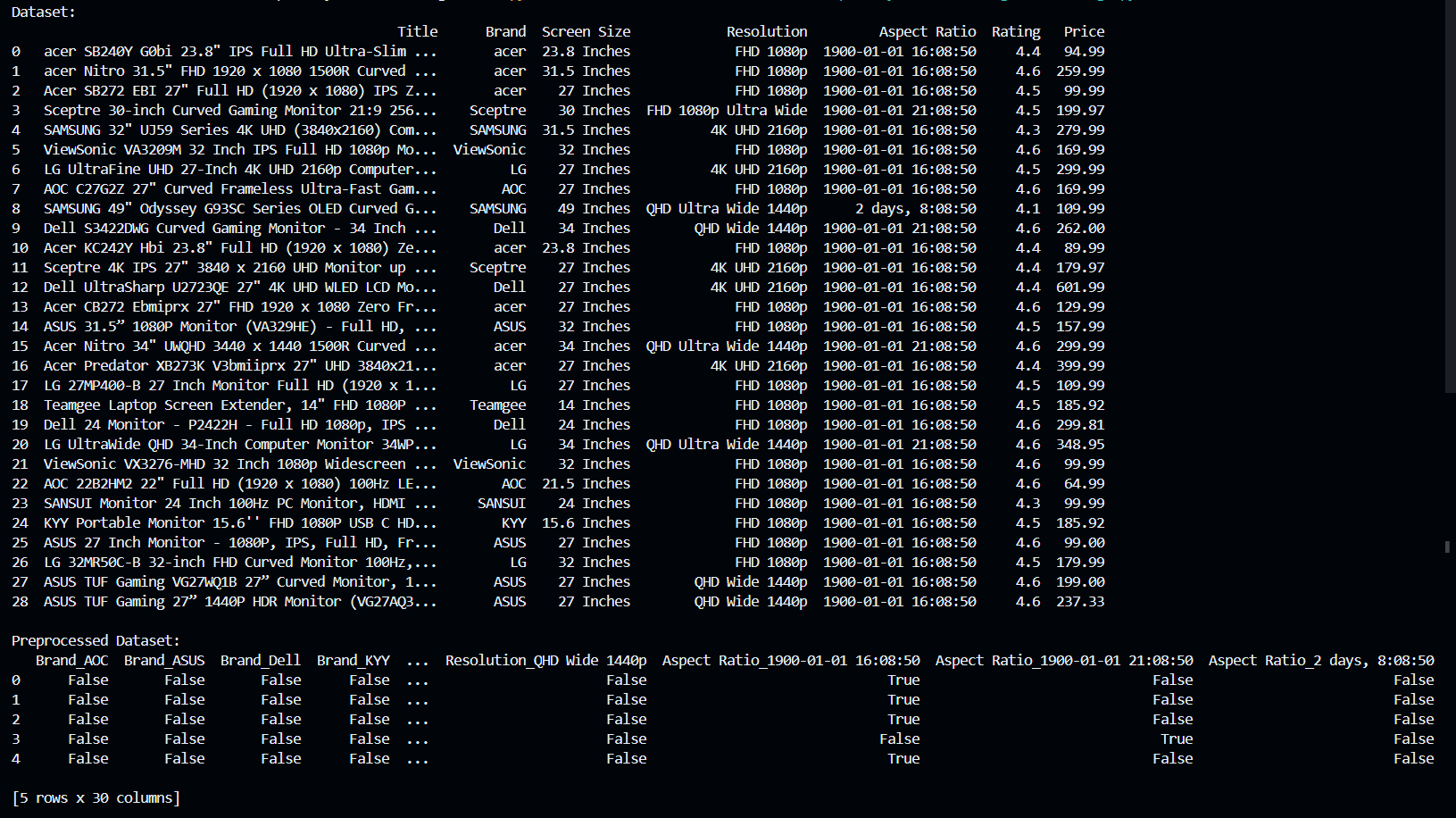
except FileNotFoundError as e:

    print(f"FileNotFoundError: {e}. Please check the file path.")

except Exception as e:

    print(f"An error occurred: {e}")

OUTPUTS:



A screenshot of a computer screen

Description automatically generated