🏍️ E-Commerce Sales Data Analysis

This is a beginner-friendly project where I used Python to explore sales data from a real online store. I wanted to understand things like what products sell the most, what time of day people buy more, and which countries had the most orders. I also practiced cleaning data and making graphs.

📂 Dataset

- Source: Kaggle - E-Commerce Data
- Total transactions: 541,909
- Time range: December 2010
- Main columns: Invoice date, product name, quantity, price, country, customer ID

🎯 What I wanted to do

- Remove rows with missing or wrong data
- Find the countries and products with the most sales
- Check what time of day people buy more
- Make charts to help see the patterns

🧰 Tools I used

Tool	What it does
Python	Programming language
Pandas	For working with the data tables
Matplotlib	To draw charts and graphs
Seaborn	For better-looking charts
Replit	Online place where I ran the code

📊 Some things I found

- GB Most orders were from the **United Kingdom**
- 🕛 People bought more between **10:00 AM and 3:00 PM**
- 🧺 Popular items were mostly decorations and home goods

- 📈 There were a few days with much higher sales than others

📷 Charts I made

Chart	What it shows
Top 10 Countries	Where most orders came from
Top 10 Products	Most frequently bought items
Sales by Hour of Day	What time people shop more
Sales Over Time (by Date)	How sales changed day by day

🧠 What I learned

- Cleaning data is important before analyzing
- Charts make patterns easier to understand
- Even simple data can show useful business info
- Python is powerful and fun to learn for data tasks

🔜 What I want to do next

- Calculate total money earned from sales
- Find out which products were returned
- Try making a dashboard with interactive charts
- Learn how to use machine learning on this kind of data

👤 About me

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I'm learning data science from scratch and doing small projects to practice. I'm also working in IT support and really enjoying Python! 🚀
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📝 License

This project is for learning purposes. The dataset is public on Kaggle and not created by me.

▶️ How to Run This Project

🟢 Option 1: Use Replit (easy)

1. Go to https://replit.com/
2. Start a new Python project
3. Upload both `main.py` and the `data.csv` file
4. Click the **Run** button
5. Watch the results appear in the console and see the graphs pop up

💻 Option 2: Run on your computer

1. Make sure you have Python installed
2. Install the libraries needed:

```
pip install pandas matplotlib seaborn
```

3. Download this project and go to the folder
4. Open a terminal or command prompt and run:

```
python main.py
```

5. You'll see the printed results and graphs will show up