✅ Task 15: Customer Segmentation (RFM Analysis) — Python

Tools:

- Primary: Google Colab
- Libraries: pandas, numpy
- Alternatives: Jupyter Notebook, Kaggle Notebook

Dataset:

- Online Retail II
- E-Commerce Data
- Customer Segmentation Dataset

Hints / Mini Guide:

1. Load dataset in pandas and clean null invoices/canceled orders.
2. Convert invoice date to datetime format.
3. Compute Recency (days since last purchase), Frequency, Monetary (total spend).
4. Create RFM score buckets using quantiles.
5. Assign segment labels (Champions, Loyal, At Risk, etc.).
6. Visualize segment counts using bar chart.
7. Export customer segmentation table to CSV.
8. Write 3 business actions per segment.

Deliverables:

- task15_rfm.ipynb
- rfm_segments.csv
- segment_actions.txt

Final Outcome:
✅ Intern learns customer segmentation and business targeting strategies.

Interview Questions Related To Above Task:

- What is RFM and where is it used?
- How do you define Recency in RFM?
- Why do we use quantile binning in segmentation?
- What actions can be taken for "At Risk" customers?
- How do you validate segmentation usefulness?

📌 **Task Submission Guidelines**

- ⏰ **Time Window:**

Youcan complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10:00 PM

- 🔍 **Self-Research Allowed:**

Youare free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

- 🛠️ **Debug Yourself:**

Tryto resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

- 💸 **No Paid Tools:**

Ifthe task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

- 📁 **GitHub Submission:**

Create a new GitHub repository for each task.

Add everything you used for the task — code, datasets, screenshots (if any), and a short README.md explaining what you did.

📤 **Submit Here:**

After completing the task, paste your GitHub repo link and submit it using the link below:

- 👉 [Submission Link]

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