LAB-5.md

LAB 5 – Starter Kit & Automation

🎯 Objective

- Automatically set up a starter project environment with a clean and organized folder structure and placeholder documentation.

🛠️ Purpose of starter_kit.sh

This script simplifies the initialization of a new project by:

- 📂 Creating a standard folder structure: scripts/, docs/, data/ inside a main project/ directory.
- 📝 Adding a README.md file in each folder to encourage documentation from the start.
- ✅ Printing a confirmation message once setup is complete.

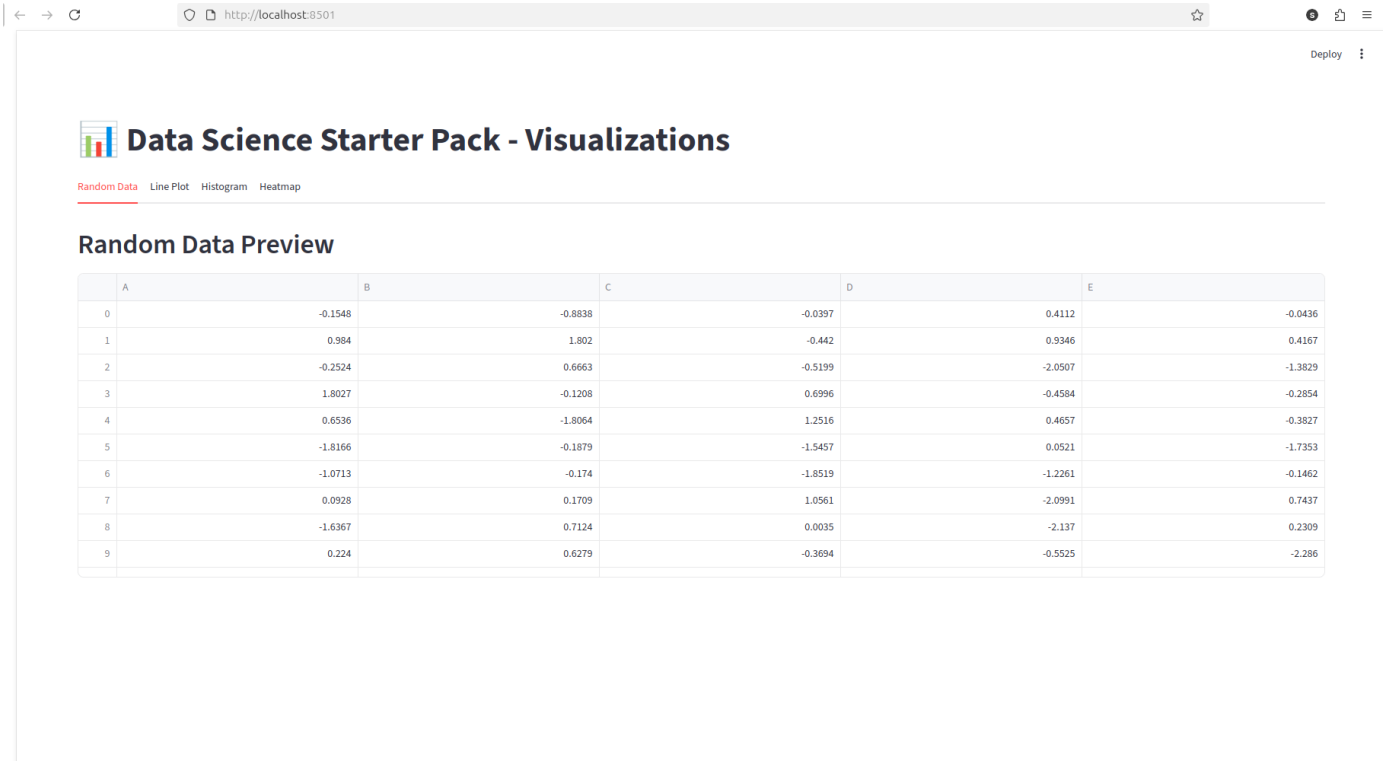
🖥️ Example Run

```
sneha@sneha-HP-Laptop-15s-fq5xxx:~/LINUX_LAB/scripts$ source /home/sneha/ds_starter/.venv/bin/activate
(.venv) sneha@sneha-HP-Laptop-15s-fq5xxx:~/LINUX_LAB/scripts$ streamlit run /home/sneha/ds_starter/app/app.py

      👋 Welcome to Streamlit!

      If you'd like to receive helpful onboarding emails, news, offers, promotions,
      and the occasional swag, please enter your email address below. Otherwise,
      leave this field blank.

      Email:  snehajaisewal14@gmail.com


  You can find our privacy policy at https://streamlit.io/privacy-policy

  Summary:
  - This open source library collects usage statistics.
  - We cannot see and do not store information contained inside Streamlit apps,
    such as text, charts, images, etc.
  - Telemetry data is stored in servers in the United States.
  - If you'd like to opt out, add the following to ~/.streamlit/config.toml,
    creating that file if necessary:

    [browser]
    gatherUsageStats = false


  You can now view your Streamlit app in your browser.

  Local URL: http://localhost:8501
  Network URL: http://192.168.1.5:8501
```

Directory Structure After Execution

```
project/
├── scripts/
│   └── README.md
├── docs/
│   └── README.md
└── data/
    └── README.md
```

Screenshot Of The Browser Link:



	A	B	C	D	E
0	-0.1548	-0.8838	-0.0397	0.4112	-0.0436
1	0.984	1.802	-0.442	0.9346	0.4167
2	-0.2524	0.6663	-0.5199	-2.0507	-1.3829
3	1.8027	-0.1208	0.6996	-0.4584	-0.2854
4	0.6536	-1.8064	1.2516	0.4657	-0.3827
5	-1.8166	-0.1879	-1.5457	0.0521	-1.7353
6	-1.0713	-0.174	-1.8519	-1.2261	-0.1462
7	0.0928	0.1709	1.0561	-2.0991	0.7437
8	-1.6367	0.7124	0.0035	-2.137	0.2309
9	0.224	0.6279	-0.3694	-0.5525	-2.286

❓ Extra Questions

Q1. What does mkdir -p do?

mkdir -p creates nested directories in a single command.

If the parent directory already exists, it does not throw an error.

Example: mkdir -p project/scripts

This will create both project/ and scripts/ (if not already present).

Q2. Why is automation useful in DevOps?

🔁 Consistency → Same setup every time, reducing errors.

⚡ Speed → Saves time by eliminating repetitive manual tasks.

🧪 Reproducibility → Ensures environments can be easily recreated.

📦 Scalability → Easily sets up multiple environments or projects.