1. Streamlit is an open-source python framework that allows developer to build web apps and machine learning models and share It with a very little code.

It is basically developed for creating data-driven web apps.

**Main features:**

**1. Simplicity**

**2. Easy deployment**

**3. Integration with data science tools**

**4. Easily addable widget using libraries**

**5. Automatic updation.**

1. Django and other frameworks is more flexible and compactible to full-stack apps development whereas streamlit is more off to machine learning models deployment.
2. **Use cases of streamlit:**

Exploring and visualizing data

Creating a real time dashboards

ML model deployment

Sharing apps with others

1. Firstly install streamlit in your environment.

Write your python script.

And then run in your terminal

1. Basic Structure:

Import streamlit module

Write script and all the required streamlit elements

Debug the error

Run in terminal and iterate all the steps again and again.

1. To add widgets like slider, input text and button, there are in\_built functions available for it like for Slider: st.slider(), Input text: st.input\_text(), Buttons: st.button()
2. Streamlit offers a variety of widgets that enable smooth user interaction.

Streamlit’s uses built-in fuctions like caching and session state fuctions to handle state management.

1. Some Best practices:

Project Directory Structure (Keep main file as the root directory)

Code Organization

Documentation

1. Deploy a Streamlit App Locally:

Install Streamlit in your environment

Wirte your script and save

Run it on terminal, then it will be deployed and URL will be generated.

1. Upload your script in github or other platforms then go streamlit in deployment session

and give provide its URL or link through your repository and click on Deploy.

1. Purpose of the requirements.txt File in the Context of Streamlit Deployment:

Dependency Management

Reproducibility

Automated Deployment