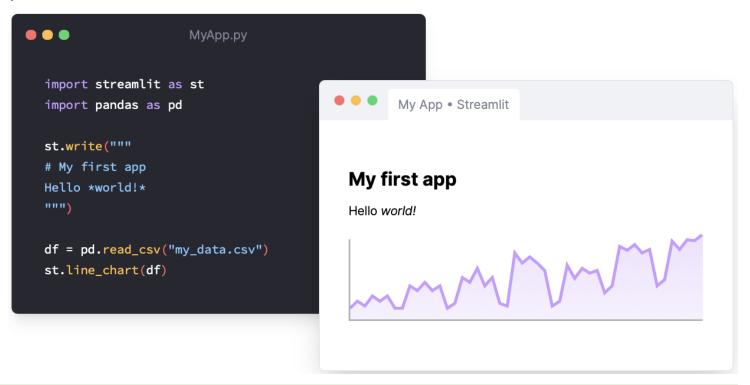# Streamlit

CMPSC 305 – Database Systems

Streamlit

Turn Python code into interactive ideas

- Main website https://streamlit.io/
- Project Gallery https://streamlit.io/gallery

Objectives of Project
We are going to build a Database Management System

Objectives

- Automatically creates a database from loaded csv files
- Give a formatted view of the available tables in created database
- Give a space where users can interact with the created database

Setting Up Virtual Environment

- Create a project directory

```
mkdir week10
cd week10
```

- Create virtual environment using Python

```
python3 -m venv myenv
# see the file tree
find . -not -path '*/\.*'
```

- Activate myenv the virtual environment

```
source myenv/bin/activate  # macOS/Linux
myenv\Scripts\activate    # Windows
```

- Deactivate the virtual environment

```
deactivate
```

- Install the Streamlit software packages in the environment

```
pip3 install streamlit
```

Steps to install libraries, organize files

- Add more libraries to your virtual environment to work with data

```
pip3 install pandas
pip3 install numpy
```

- Organize your files, ready your workspace

  - Make a directory in which to work (i.e., streamlit-dbms/)
  - Copy in the data file from your sandbox/ into streamlit-dbms/
  - Start a blank file in this directory called streamlit-dbms.py

Boilerplate code for streamlit-dbms.py

```python
#!/usr/bin/env python3

import streamlit as st
import pandas as pd
import numpy as np
import sqlite3

def main():
            """driver function of program"""
            st.title('My Database App')

# Run the app
if __name__ == "__main__":
  main()
```

Boilerplate code for streamlit-dbms.py

Execute the code

```
streamlit run streamlit-dbms.py
```

Execute streamlit-dbms.py

localhost

My Database App

Switch over to your browser and go to this URL

http://localhost:8501/

Begin coding streamlit-dbms.py