Streamlit Session

Agenda

Streamlit

Streamlit VS Dash

Installation
Hello World

Dash example in Streamlit
Step by step

....

Streamlit

- A framework to create dashboards / data-oriented web applications
- Use with Python
- Interprets Markdown language
- WOW ! Effect
- Use any charting library : plot.ly, altair ….
- https://streamlit.io/

Streamlit VS Dash

Streamlit > Dash ?

Yes : Professional looking result

with very reasonable amount of work

No HTML knowledge needed

Easy custom CSS

Easy multipage app

Additionnal libraries/components

https://extras.streamlitapp.com/

Always re-runs

Installation

```
pip install streamlit
```

Then try, from CLI

```
streamlit hello
```

Hello world

Your .py file

First.py

```
import streamlit as st
st.write("# Ma première appli Streamlit")   # this is markdown
```

CLI

```
streamlit run first.py
```

Dash example rewritten for streamlit

```
import plotly.express as px
import streamlit as st
import pandas as pd

st.write("# Ma première appli")   # this is markdown
df = pd.DataFrame({
    "Fruit": ["Apples", "Oranges", "Bananas", "Apples", "Oranges", "Bananas"],
    "Amount": [4, 1, 2, 2, 4, 5],
    "City": ["SF", "SF", "SF", "Montreal", "Montreal", "Montreal"]
})
fig = px.bar(df, x="Fruit", y="Amount", color="City", barmode="group")
st.write("## Here's our first attempt at using data to create a table:")
st.write(df)
st.write("## Here's our first attempt at showing a chart:")
st.write(fig)
fig
```

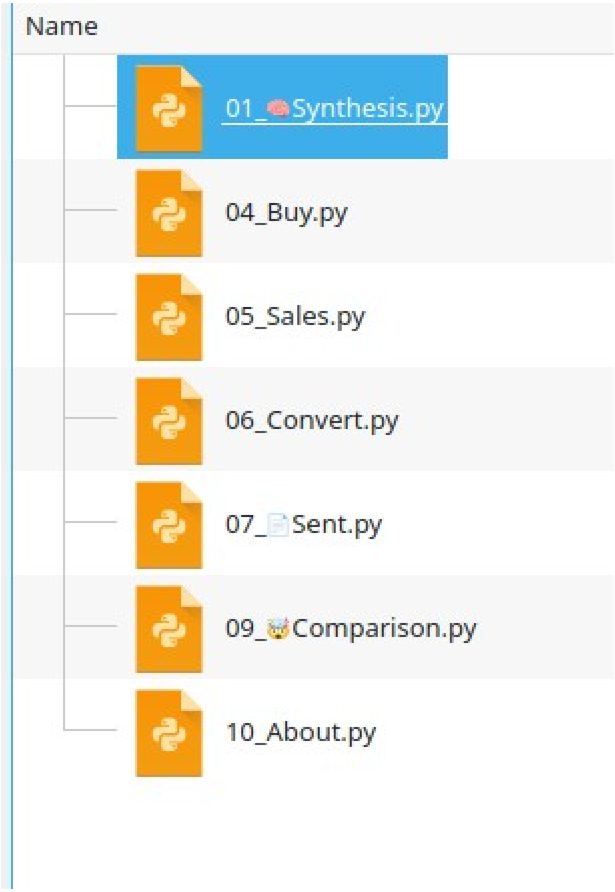
Dash examples rewritten for streamlit

```
import plotly.express as px
import streamlit as st
import pandas as pd

st.write("# Ma première appli")   # this is mark
df = pd.DataFrame({
    "Fruit": ["Apples", "Oranges", "Bananas", "Apples", "Ora   es"    na  ],
    "Amount": [4, 1, 2, 2, 4, 5],
    "City": ["SF", "SF", "SF", "Montreal", "Montreal", "Montreal"]
})
fig = px.bar(df, x="Fruit", y="Amount", color="City", barmode="group")
st.write("## Here's our first attempt at using data to create a table:")
st.write(df)
st.write("## Here's our first attempt at showing a chart:")
st.write(fig)
```

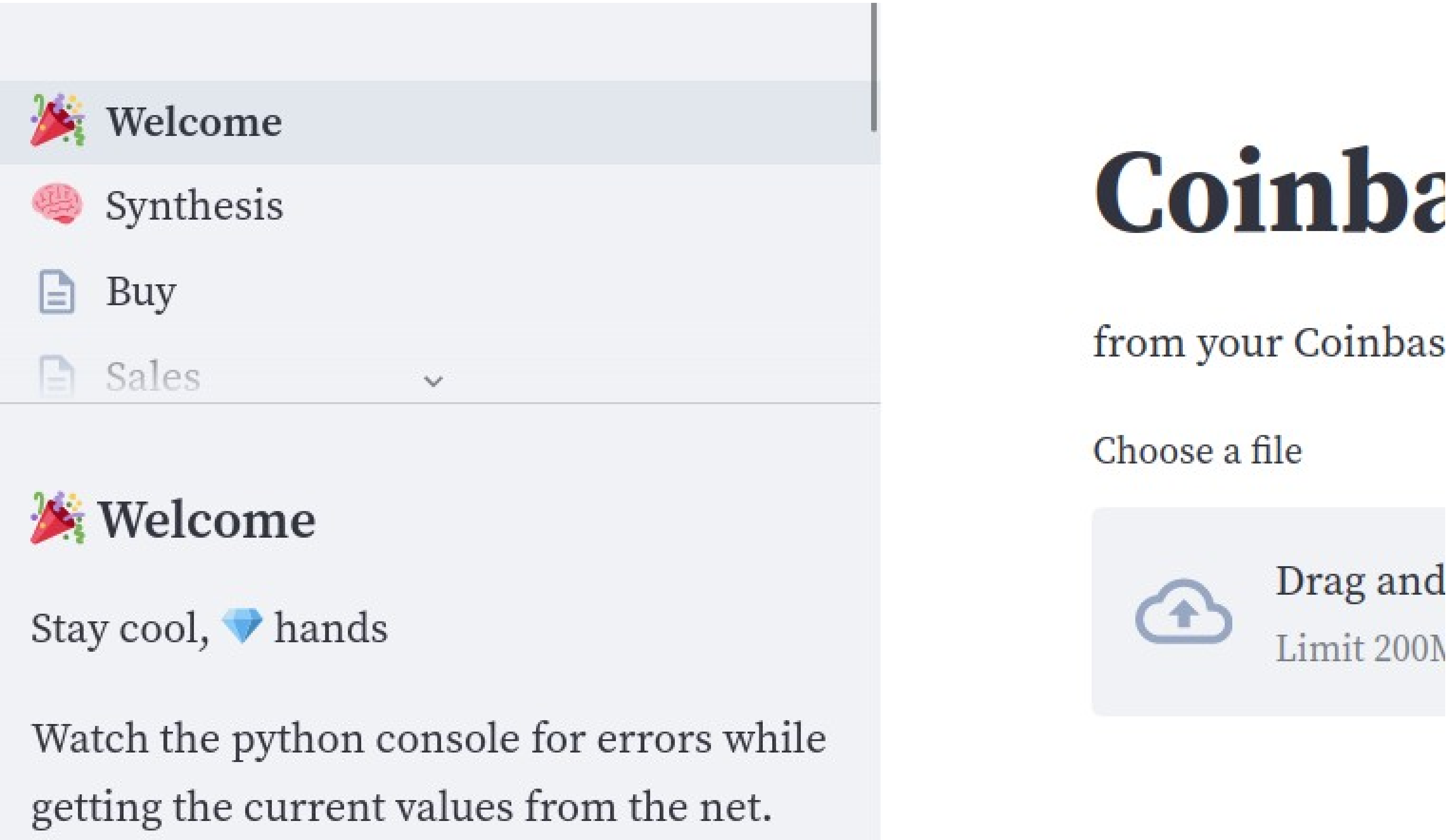
Multipage app

- Have a start file
- Have a pages folder next to it
  - Put pages in the pages folder
  - Order pages as you will
  - Have emojis



```
Name
01_🧠Synthesis.py
04_Buy.py
05_Sales.py
06_Convert.py
07_📄Sent.py
09_🤯Comparison.py
10_About.py
```

Portfolio example



🎉 Welcome

Stay cool, 💎 hands

Watch the python console for errors while getting the current values from the net.

Coinba

from your Coinbas

Choose a file

Main statements

```
st.title
st.set_page_config(
    page_title="Coinbase Portfolio Analysis",
    page_icon="   ",
    layout='wide',
    initial_sidebar_state="expanded"
)
st.sidebar.header
```

st.markdown

st.header.markdown

Columns - HOWTO

```
colInvest, colVal = st.columns(2)
with colInvest:
    Do your stuff 1
with colVal:
    Do your stuff 2
```

Radio buttons

```
genre = st.radio("Sort by Coin Name or by value",
('name', 'value'),index=0)


if genre == 'name':
    sumPerCoin = sumPerCoin.sort_values(by='Asset')
else:
    sumPerCoin = sumPerCoin.sort_values(by='delta')
bar1 = px.bar(sumPerCoin, x='delta', y='Asset',
color="Asset",
color_discrete_map=st.session_state.coin_palette)
st.plotly_chart(bar1, use_container_width=True)
```

Drawback (or not)

When you interact with a UI widget, the code is re-run

Big drawback if that means reloading data on every click.

- **history = st.session_state.history**

There is also a cache

- Use @st.cache to annotate a method that returns

References

streamlit.io

https://www.youtube.com/@andfanilo

- https://www.youtube.com/watch?v=vIQQR_yq-8I
- https://www.youtube.com/watch?v=nnmBdpvN6u8

Sample code

- https://github.com/wadael/KnowYourGraph/
- (requires a Neo4j DB)