Advanced Programming with Python. Session 7

Pepe García

2020-04-20

Advanced Programming with Python. Session 7

Dash

https://dash.plot.ly

Dash is a library for creating data visualizations

Dash. Layout

We can create HTML layouts directly in Python with Dash

```
import dash_core_components as dcc
import dash_html_components as html

html.Div(children = [
    html.H1("title"),
    dcc.Dropdown(
        id="district",
        options=districts,
        multi=True,
        value=[districts[0]["value"]]
    )
])
```

Dash. Graphs

```
import dash_core_components as dcc
import dash_html_components as html

dcc.Graph(
    id='first-graph',
    figure={
        'data': [
          {'x': [1, 2, 3], 'y': [4, 1, 2], 'type': 'bar', 'name': 'bar1'},
          {'x': [1, 2, 3], 'y': [2, 4, 5], 'type': 'bar', 'name': 'bar2'},
        ],
        'layout': {
            'title': 'Dash Data Visualization'
        }
    }
)
```

Practice

see **session-7/example-1**

Dash. Callbacks

callbacks make our Dash applications interactive. They're functions that whenever an **input** component changes, will change an **output** component

```
@app.callback(
    Output(component_id="accidents-graph",component_property="figure"),
    [Input(component_id="district", component_property="value")]
)
def update(districts):
    pass
```

Practice

let's see

example-2-callbacks/simple_callback.py

Practice

But, callbacks can do much more than that, they can modify graphs whenever some component value is changed by the user

let's see

example-3-callbacks/more_callbacks.py

Dash. More interesting example

All the examples we've seen so far fairly simple, let's see a more interesting example in

example-3/server.py

Exercise

Modify example-3 so that it filters by accident type (**TIPO ACCIDENTE**) too