**Image Gallery Exercise**

**// Request json from API**

**// Download image names from folder to list**

**// Add images to data frame**

**// Save new data frame as a csv or json**

**// Pull images into webpage and create lightbox from list of images**

**Script.py**

# Get list of images from an API

import requests

api\_url = 'http://127.0.0.1:5000/api/all'

r = requests.get(api\_url)

print(r.status\_code)

data\_json= r.json()

pd.DataFrame(data\_json).to\_csv('data.csv', index=False)

# Get list of images from folder and save as csv

import os

import numpy as np

file\_list = []

file\_path = "/Volumes/Samsung\_t3/project-repos/exercises/pics"

for root, dirs, files in os.walk(file\_path):

for file in files:

file\_list.append(file)

print(len(file\_list))

np.savetxt('file.csv', file\_list, fmt="%s", delimiter = ",")

# Read from CSV

import numpy as np

import pandas as pd

from matplotlib import pyplot as plt

file\_path = "/Volumes/Samsung\_t3/project-repos/exercises/file.csv"

df = pd.read\_csv(file\_path)

# Check the data and adjust/add new information as needed

print(df.head())

df.columns=["img\_name"]

df['Index'] = df.index

print(df.head())

# Save new dataframe as csv

df.to\_csv(file\_path, index=False)

# Convert to json

list(df)

import csv

import json

csvfile = open(file\_path, 'r')

jsonfile = open("/Volumes/Samsung\_t3/project-repos/exercises/file.json", 'w')

fieldnames = ('img\_name', 'Index')

reader = csv.DictReader(csvfile, fieldnames)

out = json.dumps( [row for row in reader])

jsonfile.write(out)

**index.html**

<!DOCTYPE html

<html>

<head>

<title>Real Brooklyn Photos</title>

<script src = "https://d3js.org/d3.v4.js"></script>

<style>

html {

font-family:'Helvetica-Neue',sans-serif;

left:0;

top:0;

margin:0;

padding:0;

width:100%;

}

h1 {

font-weight:900;

width:20%;

margin:1%;

font-size:2em;

border:0.1em solid black;

padding:1% 2%;

line-height:1em;

letter-spacing:-0.05em;

display:inline-block;

}

h2 {

display:inline-block;

float:right;

margin-top:5%;

font-weight:100;

}

em {

font-weight:900;

display:inline-block;

}

header {

padding:5%;

}

</style>

</head>

<body>

<header>

<h1>Real Brooklyn Photos</h1>

<h2>Real Recognize Real<em>.</em></h2>

</header>

<lightbox-slider></lightbox-slider>

<photo-collage></photo-collage>

</body>

<script>

//Define custom elements

customElements.define('lightbox-slider', class extends HTMLElement {

constructor(){

super();

this.attachShadow({mode:"open"}).innerHTML = `

<style>

:host {

width:100%;

left:0;

top:0;

height:100vh;

background-color:black;

display:none;

position:fixed;

z-index:1;

}

::slotted( img ){

height:80%;

margin-top:5%;

margin-left:35%;

}

</style>

<slot></slot>

`;

}

})

customElements.define('photo-collage', class extends HTMLElement {

constructor() {

super();

this.attachShadow({mode:"open"}).innerHTML = `

<style>

:host {

width:100%;

height:auto;

z-index:0;

}

</style>

<slot></slot>

`;

}

})

customElements.define('img-holder', class extends HTMLElement {

constructor() {

super();

this.attachShadow({mode:"open"}).innerHTML = `

<style>

:host( img-holder ) {

display:inline-block;

overflow:hidden;

width:25%;

max-height:50vh;

top:0;

left:0;

line-height:0em;

}

::slotted( img ){

transition: 0.25s ease-in-out;

z-index:0;

width:120%;

cursor:pointer;

}

</style>

<slot></slot>

`;

}

})

//Get photos from json and send to page

var json;

// Pure JS method

// var xttp = new XMLHttpRequest();

// xttp.open("GET", 'https://raw.githubusercontent.com/3milychu/exercises/master/file.json', true);

// xttp.send();

// xttp.onreadystatechange = function() {

// if(this.readyState == 4 && this.status == 200) {

// json = JSON.parse(this.responseText);

// };

// d3 method

d3.json('https://raw.githubusercontent.com/3milychu/exercises/master/file.json', function(json){

json = json.filter(function(d){

return d.Index != "Index";

})

d3.select('photo-collage').selectAll('photo-collage')

.data(json)

.enter()

.append('img-holder')

.append('img')

.attr("class", "image")

.attr("id", function(d) {return d.Index})

.attr("src", function(d) {return "pics/" + d.img\_name})

.on("mouseover", zoom)

.on("mouseout", zoomout)

.exit()

// On escape or close button, remove lightbox slider

document.onkeydown = function(evt) {

console.log(json);

evt = evt || window.event;

if(evt.keyCode ==27 ) {

document.querySelector('lightbox-slider').style.display= "none";

} else if (evt.keyCode == 39){

el = document.querySelector('lightbox-slider img')

currentImg = el.id;

console.log(currentImg);

var index = json.findIndex(p => p.Index == currentImg)

var next = index+1;

el.id = next;

nextSrc = json[next]['img\_name'];

el.src = "pics/"+ nextSrc;

} else if (evt.keyCode == 37){

el = document.querySelector('lightbox-slider img')

currentImg = el.id;

console.log(currentImg);

var index = json.findIndex(d => d.Index == currentImg)

var next = index-1;

nextSrc = json[next]['img\_name'];

el.src = "pics/"+ nextSrc;

el.id = next;

}

}

})

function zoom () {

this.style.width= "200%";

}

function zoomout () {

this.style.width= "150%";

}

// When click on an image, pop up the image in lightbox-slider

var collage = document.querySelector('photo-collage');

var lightbox = document.querySelector('lightbox-slider');

var clickableImages = collage.getElementsByTagName('img');

console.log(clickableImages);

document.body.addEventListener("click", function () {

for(i=0;i<clickableImages.length;i++) {

clickableImages[i].addEventListener("click", function() {

console.log("this works!");

lightbox.innerHTML = "";

lightbox.style.display="block";

var elem = document.createElement('img');

elem.id = this.id;

elem.src = this.src;

document.querySelector('lightbox-slider').appendChild(elem);

})

}

})

</script>

</html>