```
# imports - only import what is needed for security
# while url for is not directly used in this file it is imported so the HTML files
can use it
# so the HTML files can use it to connect to CSS and JS files
from flask import Flask, render_template, url_for, request, jsonify
from flask cors import CORS
from yagmail import SMTP
from json import dumps, loads
from os import listdir
# local imports
from functions.openweather import OpenWeather
from functions.ambee import Ambee
from functions.defra import get_pollution
from functions.advice import get_advice
ow = OpenWeather()
am = Ambee()
# create the app
app = Flask(__name__)
CORS(app)
# return pages
@app.route('/')
def homepage():
 return render_template('home.html')
@app.route('/blog')
def blogpage():
 return render_template('blog.html')
@app.route('/weather')
def weatherpage():
return render_template('weather.html')
@app.route('/contact')
def contactpage():
 return render_template('contact.html')
@app.route('/admin')
def adminpage():
 return render_template('admin.html')
@app.route('/blog/view/<id>')
def viewpage(id): # the argument is not used but is there so that <id> in the URL
can be anything
 return render_template('view.html')
```

```
# weather page content generation
@app.route('/weather/content', methods=['POST'])
def weather_data_generation():
  # get json body
 values = request.get_json()
 longitude = values['longitude']
 latitude = values['latitude']
 time = values['time']
 # openWeather interactions
  city, country = ow.reverse_geocoding(longitude,latitude)
 forecast = ow.forecast(longitude,latitude,time)
  # Ambee interactions
 pollen = am.get_pollen(longitude,latitude)
 # DEFRA map data
 pollution = get_pollution(longitude, latitude)
  # advice generation
 advice = get_advice(forecast,pollen)
  response = {
    'location': [city,country],
    'forecast': forecast,
    'pollen' : pollen,
    'pollution': pollution,
    'advice' : advice
return jsonify(response), 200
# send email
@app.route('/contact/send', methods=['POST'])
def send_email():
  # get json body
 data = request.get_json()
 # load the email and password from file of the sender
 with open('sender.txt', 'r') as f:
    contents = [line[:-1] for line in f.readlines()]
    email = contents[0]
  passwd = contents[1]
 # load the recipient from receiver.txt
 with open('receiver.txt', 'r') as f:
   receiver = f.read()
 # formulate email body
 subject = data['subject']
```

```
body = [f"This is {data['name']}. Send replies to
{data['reply_email']}.\n\n\n{data['body']}"]
SMTP(email,passwd).send(receiver, subject, body)
  response = {
    'message' : 'Email sent successfully.'
 return jsonify(response), 201
# check admin password
@app.route('/passcheck',methods=['POST'])
def passcheck():
 # get json body
 data = request.get_json()
 guess_hash = data['hash']
 # load the correct hash
 with open('correct_pass_hash.txt', 'r') as f:
   correct_hash = f.read()
 # compare
  if guess_hash == correct_hash:
    message = 'Correct password'
   code = 200
 else:
    message = 'Wrong password'
   code = 401
 # send response
 response = {
  'message': message
 return jsonify(response), code
# change admin password
@app.route('/admin/password', methods=['POST'])
def changepass():
 # get ison body
 data = request.get_json()
 hash = data['hash']
 # write to the file
 with open('correct_pass_hash.txt', 'w') as f:
 f.write(hash)
 # response
 response = {
```

```
'message': 'Password updated successfully'
 return jsonify(response), 201
# change / get contact email
@app.route('/admin/email', methods=['GET','POST'])
def contact_email():
 # get current email
 if request.method == 'GET':
    with open('receiver.txt','r') as f:
    email = f.read()
   response = {
     'email': email
   return jsonify(response), 200
 # update email
 else:
   data = request.get_json()
    with open('receiver.txt','w') as f:
     f.write(data['email'])
    response = {
      'message' : 'Email updated successfully'
    return jsonify(response), 200
# blog post creation
@app.route('/admin/create', methods=['POST'])
def create_post():
 blog_json = request.get_json()
 timestamp = blog_json['timestamp']
 # create blog file
 with open(f'static/blog/{timestamp}.json', 'w') as f:
  f.write(dumps(blog_json))
 # response
 response = {
    'message': 'Blog post created successfully.'
 return jsonify(response), 201
# gets all blog posts in reverse release order
@app.route('/blog/all', methods=['GET'])
def load_blogs():
 # get a list of all files
 posts = listdir('static/blog')
  posts.sort()
  # display them in console for debug
```

```
print(f'Contents of static/blog: {posts}')
 # for each one load it and store the contents in all_posts
  # which is a list so they stay in the correct order when sent
 all_posts = []
 for post_name in posts:
  with open(f'static/blog/{post_name}', 'r') as f:
    post_str = f.read()
   post json = loads(post str)
    all posts.append(post json)
 # newest first
 all posts.reverse()
 # response
 response = {
  'all posts': all posts
 return jsonify(response), 200
# gets just the most recent blog post to save on transfer time
# this function is very similar to the above one but without the loop
@app.route('/lastblog', methods=['GET'])
def last_blog():
 # get a list of all files
 posts = listdir('static/blog')
 posts.sort()
 # display them in console for debug
 print(f'Contents of static/blog: {posts}')
 # get contents of most recent
 with open(f'static/blog/{posts[-1]}', 'r') as f:
 post_str = f.read()
 # response - directly send the blog json so less indexing problems at the other
 response = loads(post_str)
 return jsonify(response), 200
# gets a specific blog post
# very similar to the above but after a specific value instead of the last one
# so it doesn't need to list all of the options
@app.route('/getblog/<id>', methods=['GET'])
def specific_blog(id):
 # get contents of correct post
 with open(f'static/blog/{id}.json', 'r') as f:
   post_str = f.read()
```

```
# response - directly send the blog json so less indexing problems at the other
end
  response = loads(post_str)
 return jsonify(response), 200
## RUN ##
correct pass hash.txt
f8459a0433df302e1c87fd8e9729f36f80b040c5ee1bba2262795a82e490dc35
sender.txt
healthadvicegroup@gmail.com
egryuepvrtktkqjx
H341thc4r3
first line is email, second line is app password,
third is normal password for your access
DO NOT EDIT THIS FILE!!!
receiver.txt
jacob.vincent.331@accesstomusic.ac.uk
/functions/advice.py
 ""This file will generate the advice for the weather
page. At the moment, it just generates sample advice
based on the other sample data."""
def get_advice(forecast, pollen):
  return [
       title': 'Cold temperatures soon',
       'description' : 'Wrap up nice and warm! Additionally, maybe stay at home and
keep warm with a hot water bottle if you can.'
```

```
'title': 'Raining soon',
      'description' : 'Make sure to wear waterproof clothing, or bring an umbrella!
Also, keep in mind that roads can be more slippery when wet.'
       'title': 'High pollen count',
      'description' : 'If you suffer from hay fever, be sure you know the risks and
learn to prevent them.'
functions/ambee,py
"""This file contains functions that relate to
Ambee's API. Until a subscription is
acquired this will generate dummy data.
Subscriptions are not free, however after talking
to Ambee's support team they have agreed to give me
5000 free requests that last until August, which is
long enough for this project to be graded."""
class Ambee:
               _init__ to load auth key
 def __init__(self):
 pass
  def get_pollen(self, long, lat):
    return {
      'grass' : 2,
       trees' : 120,
      'weeds' : 90
functions/defra.py
"""This file contains functions that relate to
DEFRA map data. This returns dummy data for now, but
will use actual data via Pandas once downloaded"""
def get pollution(long, lat):
 return [
      'year': 2021, # this is the newest publicly available data
      'value': 0.808
       year': 2020,
      'value': 0.917
```

```
'year': 2019,
       'value': 0.902
       'year': 2018,
      'value': 1.024
       'year': 2017,
      'value': 1.056
/functions/openweather.py
"""This file contains functions that relate to
OpenWeather's API. Until a free subscription is
acquired this will generate dummy data."""
class OpenWeather:
  # space for
               init to load auth key
 def __init__(self):
 pass
  def reverse_geocoding(self, long, lat):
   return 'Norwich', 'UK'
  def forecast(self, long, lat, time):
    return {
      'Now': {
        'type':'01d', # the type refers to the icons openweather provide
        'temp':16
      },
       '11am': {
        'type':'01d',
        'temp':16
      '12pm': {
        'type': '02d',
```

'temp': 17

'type': '04d',
'temp': 13

'type': '09d',

'1pm': {

'2pm': {

'temp': 9

/static/blog/1679654311845.json

/static/blog/1679654688955.json

```
{"title": "Example Post 2", "image":
"https://openweathermap.org/img/wn/09d@2x.png", "preview": "10 paragraphs of lorem
ipsum!", "html": "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
eiusmod tempor incididunt ut labore et dolore magna aliqua. A scelerisque purus
semper eget duis. Egestas diam in arcu cursus euismod quis viverra. Eu mi bibendum
neque egestas congue quisque egestas diam. Proin libero nunc consequat interdum
varius sit amet mattis vulputate. Sed augue lacus viverra vitae congue eu consequat
```

```
ac felis. Etiam erat velit scelerisque in dictum non consectetur. Aliquet sagittis
id consectetur purus. Feugiat vivamus at augue eget arcu dictum varius duis. Cras
semper auctor neque vitae. Ornare arcu odio ut sem nulla pharetra
diam.<br><br>Sodales ut etiam sit amet. Pretium nibh ipsum consequat nisl vel.
Egestas pretium aenean pharetra magna ac placerat. Diam vulputate ut pharetra sit
amet aliquam id diam. Tincidunt lobortis feugiat vivamus at augue eget. Sit amet
dictum sit amet justo. Proin sagittis nisl rhoncus mattis rhoncus urna neque
viverra. Fringilla urna porttitor rhoncus dolor purus. In hac habitasse platea
dictumst vestibulum. Ullamcorper morbi tincidunt ornare massa eget egestas purus.
Euismod quis viverra nibh cras pulvinar. Sit amet luctus venenatis lectus magna
fringilla. Ut aliquam purus sit amet luctus venenatis lectus magna fringilla. Dui
faucibus in ornare quam. Non tellus orci ac auctor augue mauris augue. Condimentum
vitae sapien pellentesque habitant morbi tristique senectus et. Lacus vel facilisis
volutpat est velit. Tincidunt tortor aliquam nulla facilisi cras. Adipiscing vitae
proin sagittis nisl rhoncus mattis rhoncus urna. Pellentesque nec nam aliquam sem
et tortor consequat id porta.\n<br><br>\nEt tortor consequat id porta nibh
venenatis. Volutpat sed cras ornare arcu. Porta non pulvinar neque laoreet
suspendisse interdum consectetur libero. Adipiscing diam donec adipiscing tristique
risus nec feugiat in fermentum. Iaculis urna id volutpat lacus laoreet. Interdum
varius sit amet mattis vulputate enim. At tempor commodo ullamcorper a lacus
vestibulum sed arcu non. Mattis aliquam faucibus purus in massa tempor nec feugiat
nisl. Nisi quis eleifend quam adipiscing vitae proin sagittis. Ornare massa eget
egestas purus viverra. Dictum sit amet justo donec enim. Sapien pellentesque
habitant morbi tristique senectus et netus et malesuada. Convallis aenean et tortor
at risus viverra. Tellus at urna condimentum mattis pellentesque id
nibh.\n<br><br>\nNunc sed id semper risus in hendrerit gravida rutrum quisque.
Varius morbi enim nunc faucibus a pellentesque. Habitasse platea dictumst quisque
sagittis purus. Nunc mi ipsum faucibus vitae aliquet nec ullamcorper. Morbi tempus
iaculis urna id volutpat lacus laoreet non curabitur. Viverra tellus in hac
habitasse platea dictumst vestibulum rhoncus. Ornare massa eget egestas purus
viverra. Lobortis feugiat vivamus at augue eget arcu dictum varius duis. Bibendum
at varius vel pharetra vel turpis nunc eget lorem. Lectus nulla at volutpat diam ut
venenatis tellus in metus. Sed cras ornare arcu dui vivamus arcu felis bibendum.
Aenean et tortor at risus viverra. Sit amet justo donec enim diam vulputate ut
pharetra sit. Sed arcu non odio euismod lacinia. Convallis aenean et tortor at
risus viverra adipiscing. Sodales ut etiam sit amet nisl purus in mollis. Tincidunt
tortor aliquam nulla facilisi. Feugiat nisl pretium fusce id velit ut tortor
pretium viverra. Aliquam sem fringilla ut morbi tincidunt.\n<br><br>\nCursus turpis
massa tincidunt dui ut ornare lectus sit. Porttitor leo a diam sollicitudin tempor
id eu nisl nunc. Nam libero justo laoreet sit. Mauris vitae ultricies leo integer
malesuada nunc. Eu facilisis sed odio morbi quis commodo odio aenean sed. Egestas
egestas fringilla phasellus faucibus scelerisque. Consequat id porta nibh
venenatis. Phasellus faucibus scelerisque eleifend donec pretium vulputate sapien.
Vivamus at augue eget arcu dictum varius duis. Vel orci porta non pulvinar neque.
Eu facilisis sed odio morbi quis commodo. Tellus rutrum tellus pellentesque eu
tincidunt. Et netus et malesuada fames ac turpis egestas sed. Nulla facilisi cras
fermentum odio eu feugiat pretium. Eget nullam non nisi est sit. Dui sapien eget mi
proin sed libero enim. Nunc consequat interdum varius sit amet mattis. Sed turpis
tincidunt id aliquet risus feugiat in ante.\n<br><br>\nFaucibus ornare suspendisse
sed nisi lacus. Lacus viverra vitae congue eu. Magna ac placerat vestibulum lectus
```

```
mauris ultrices. Risus commodo viverra maecenas accumsan lacus vel facilisis
volutpat est. Cursus in hac habitasse platea dictumst quisque. Nibh venenatis cras
sed felis eget velit aliquet sagittis. Etiam sit amet nisl purus in mollis.
Ullamcorper sit amet risus nullam eget felis eget. Erat nam at lectus urna duis
convallis. Elit eget gravida cum sociis natoque penatibus. Lacus laoreet non
curabitur gravida arcu ac. Habitant morbi tristique senectus et netus et malesuada
fames ac. Augue interdum velit euismod in. Quis lectus nulla at volutpat diam ut
venenatis tellus in. Viverra suspendisse potenti nullam ac tortor vitae. Felis
imperdiet proin fermentum leo vel orci porta non. Ridiculus mus mauris vitae
ultricies leo. Proin libero nunc consequat interdum varius sit amet mattis
vulputate.\n<br><br>\nEu turpis egestas pretium aenean pharetra magna ac. Facilisis
magna etiam tempor orci. Velit laoreet id donec ultrices tincidunt arcu. Risus in
hendrerit gravida rutrum quisque non tellus orci ac. Ac orci phasellus egestas
tellus rutrum tellus. Eu scelerisque felis imperdiet proin fermentum. Sagittis eu
volutpat odio facilisis mauris sit amet massa vitae. Id semper risus in hendrerit
gravida rutrum quisque non. Rhoncus aenean vel elit scelerisque mauris pellentesque
pulvinar. Amet aliquam id diam maecenas ultricies. Lacus sed turpis tincidunt id.
Enim ut sem viverra aliquet. Dictum fusce ut placerat orci nulla pellentesque
dignissim. Aliquam eleifend mi in nulla posuere sollicitudin aliquam. Lorem dolor
sed viverra ipsum nunc aliquet bibendum enim. Fames ac turpis egestas integer eget
aliquet nibh. At imperdiet dui accumsan sit amet nulla facilisi morbi tempus. Est
placerat in egestas erat imperdiet sed.\n<br><br>\nTortor posuere ac ut consequat
semper viverra. Ullamcorper eget nulla facilisi etiam dignissim diam. Sed vulputate
odio ut enim. Sit amet tellus cras adipiscing enim eu turpis egestas pretium.
Mattis pellentesque id nibh tortor id aliquet lectus. Tincidunt eget nullam non
nisi. Vitae semper quis lectus nulla at. Aenean pharetra magna ac placerat. At
lectus urna duis convallis convallis tellus id. Tempus egestas sed sed risus
pretium quam vulputate dignissim suspendisse. Vitae sapien pellentesque habitant
morbi tristique senectus et. Augue neque gravida in fermentum. Urna molestie at
elementum eu facilisis. Odio euismod lacinia at quis risus sed vulputate odio ut.
Aliquet risus feugiat in ante metus dictum at. Adipiscing bibendum est ultricies
integer quis auctor elit sed vulputate. Leo vel orci porta non. Nulla aliquet
porttitor lacus luctus accumsan tortor posuere. Integer quis auctor elit
sed.\n<br><br>\nAt tellus at urna condimentum mattis pellentesque id nibh tortor.
Velit dignissim sodales ut eu sem integer. Est pellentesque elit ullamcorper
dignissim cras tincidunt lobortis feugiat. Massa massa ultricies mi quis. Et
malesuada fames ac turpis egestas sed. Tincidunt lobortis feugiat vivamus at augue
eget arcu dictum. Vel risus commodo viverra maecenas accumsan lacus. Commodo odio
aenean sed adipiscing diam donec. Non blandit massa enim nec dui. Nunc vel risus
commodo viverra maecenas accumsan lacus. Massa id neque aliquam vestibulum. At
imperdiet dui accumsan sit. Mauris augue neque gravida in fermentum et sollicitudin
ac.\n<br><br>>\nConvallis convallis tellus id interdum velit. Mollis nunc sed id
semper risus in. Est ullamcorper eget nulla facilisi etiam dignissim diam quis
enim. Id donec ultrices tincidunt arcu non sodales neque. Nisl suscipit adipiscing
bibendum est ultricies integer quis auctor. Sit amet venenatis urna cursus eget
nunc scelerisque. Elit at imperdiet dui accumsan sit amet nulla. Ultricies mi eget
mauris pharetra. Fermentum dui faucibus in ornare quam viverra. Eu ultrices vitae
auctor eu augue ut lectus arcu bibendum. Gravida quis blandit turpis cursus in hac
habitasse platea dictumst. Placerat in egestas erat imperdiet. Nunc pulvinar sapien
et ligula ullamcorper malesuada proin libero nunc. Purus in massa tempor nec
```

feugiat nisl. Imperdiet dui accumsan sit amet nulla facilisi morbi. Arcu bibendum at varius vel pharetra vel turpis. Volutpat sed cras ornare arcu.", "timestamp": 1679654688955}

/static/blog/1679655156413.json

{"title": "Example post 3", "image": "/static/site/logo.png", "preview": "Look, the logo! I ran out of ideas when it comes to what to put in these example posts, but I need three to properly create and test the blog page. So, examiner, for your convenience, here is a link to the admin panel.", "html": "Admin panel", "timestamp": 1679655156413}

/static/site/go-arrow.png



Normally transparent background

/static/site/logo.png



/static/site/sun.png



/static/favicon.ico



/static/admin.css

```
body {
  background-color: #ececec;
  font-family: Arial, Helvetica, sans-serif;
}
```

```
/* Navbar */
.navbar {
  background-color: #7EF297;
 width: 100%;
 height: 100px;
 position: fixed;
 top: 0%;
 left: 0%;
  border-bottom-color: #253031;
  border-bottom-width: 3px;
 border-bottom-style: solid;
.navbar > a {
  color: black;
  top: 68px;
 height: 30px;
 position: fixed;
 font-family: Arial, Helvetica, sans-serif;
 width: 146px;
  text-align: center;
 text-decoration: none;
  border-width: 2px;
  border-color: #253031;
  border-style: solid;
 border-bottom: 0cm;
}
.contact {
 right: 10%;
 background-color: #00bf63;
}
.blog_{
 right: calc(10% + 153px);
 background-color: #00bf63;
}
.weather {
 right: calc(10% + 306px);
 background-color: #00bf63;
}
.home {
 right: calc(10% + 459px);
 background-color: #00bf63;
}
/* Main body */
```

```
/* password lock */
.password {
 position: absolute;
 top: 50%;
 border-style: solid;
 left: 50%;
 transform: translateX(-50%);
}
.main {
display: none;
/* password update */
.password-change {
 position: absolute;
 top: 100px;
 left: 10px;
 width: 375px;
 height: 130px;
 border-style: solid;
 border-width: 3px;
.password-change > div > input {
  position: absolute;
 right: 0%;
}
/* email update */
.email-change {
  position: absolute;
 top: 233px;
 left: 10px;
 border-style: solid;
 height: 130px;
 width: 375px;
.email {
 width: 75%;
 position: absolute;
 right: 0px;
/* blog editor */
.blog-editor {
  position: absolute;
 left: 388px;
  right: 10px;
 top: 100px;
 bottom: 40px;
  border-style: solid;
```

```
}
.title {
  position: absolute;
 width: 80%;
 right: 20px;
 top: 80px;
}
.title-label {
 position: absolute;
 width: 20%;
  text-align: center;
 top: 80px;
}
.image-url {
  position: absolute;
 width: 80%;
 right: 20px;
 top: 105px;
}
.image-url-label {
 position: absolute;
  width: 20%;
 text-align: center;
 top: 105px;
}
.preview {
  position: absolute;
 width: 40%;
 bottom: 50px;
 left: 5%;
 resize: none;
 height: calc(100% - 225px);
.preview-label {
  position: absolute;
 left: 5%;
 top: 150px;
}
.post-body {
  position: absolute;
  width: 40%;
  bottom: 50px;
  right: 5%;
```

resize: none;

```
height: calc(100% - 225px);
.post-body-label {
 position: absolute;
 right: 5%;
 width: calc(40\% + 7px);
 top: 150px;
}
.create-post {
  position: absolute;
  bottom: 5px;
 left: 5px;
 border-color: #00bf63;
 width: 100px;
}
.clear-blog {
  position: absolute;
 bottom: 5px;
  left: 110px;
 border-color: crimson;
.blog-editor-title {
 position: absolute;
 left: 10px;
 top: 0px;
}
/* Update posts */
.existing-posts {
  position: absolute;
  top: 366px;
 left: 10px;
  border-style: solid;
 width: 375px;
 bottom: 40px;
 overflow-y: scroll;
.existing-posts > div {
 position: absolute;
 width: 100%;
 border-top-style: solid;
 border-bottom-style: solid;
 border-color: #aaaaaa;
 height: 175px;
```

```
.existing-posts > div > h3 {
 position: absolute;
 text-align: center;
 left: 50%;
 transform: translateX(-50%);
}
.existing-posts > div > img {
 position: absolute;
 height: 125px;
 width: 60%;
 top: 50px;
.existing-posts > div > button {
  position: absolute;
 border-color: orange;
 bottom: 60px;
 transform: translateY(50%);
 right: 20px;
}
/* message updates */
.response {
  position: absolute;
 bottom: 5px;
 width: 99%;
 text-align: center;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 15px;
 height: 20px;
}
/static/blog.css
body {
  background-color: #ececec;
 font-family: Arial, Helvetica, sans-serif;
}
/* Navbar */
.navbar {
  background-color: #7EF297;
 width: 100%;
  height: 100px;
 position: fixed;
  top: 0%;
  left: 0%;
 z-index: 9999;
```

```
border-bottom-color: #253031;
  border-bottom-width: 3px;
 border-bottom-style: solid;
.navbar > a {
 color: black;
 top: 68px;
 height: 30px;
  position: fixed;
  font-family: Arial, Helvetica, sans-serif;
  width: 146px;
  text-align: center;
  text-decoration: none;
  border-width: 2px;
  border-color: #253031;
  border-style: solid;
 border-bottom: 0cm;
}
.contact {
  right: 10%;
 background-color: #00bf63;
.blog {
 right: calc(10% + 153px);
 background-color: #ececec;
}
.weather {
 right: calc(10% + 306px);
 background-color: #00bf63;
}
.home {
  right: calc(10% + 459px);
 background-color: #00bf63;
}
/* Main body */
.loading {
 position: absolute;
 left: 50%;
 top: 200px;
 transform: translateX(-50%);
/* Posts */
```

```
.posts > div {
 position: absolute;
 width: 80%;
 left: 50%;
 transform: translateX(-50%);
 height: 325px;
 background-color: #7EF297;
 border-radius: 50px;
 border-color: #253031;
 border-width: 5px;
 border-style: solid;
.posts > div > h3 {
 position: absolute;
 width: calc(100% - 325px);
 text-align: center;
 right: 0%;
 font-size: 30px;
top: 0px;
.posts > div > img {
 position: absolute;
 width: 350px;
 top: 50%;
 transform: translateY(-50%);
.posts > div > p {
 font-size: 20px;
 position: absolute;
 top: 70px;
 width: calc(100% - 375px);
 right: 25px;
 text-align: center;
.posts > div > button {
 position: absolute;
 border-radius: 1000px;
 width: 10%;
 font-size: 25px;
 color: white;
 background-color: #00bf63;
 right: 50px;
 bottom: 25px;
```

```
body {
background-color: #ececec;
}
/* Navbar */
.navbar {
 background-color: #7EF297;
 width: 100%;
 height: 100px;
 position: fixed;
 top: 0%;
  left: 0%;
  border-bottom-color: #253031;
  border-bottom-width: 3px;
 border-bottom-style: solid;
}
.navbar > a {
  color: black;
 top: 68px;
 height: 30px;
 position: fixed;
 font-family: Arial, Helvetica, sans-serif;
 width: 146px;
 text-align: center;
  text-decoration: none;
  border-width: 2px;
  border-color: #253031;
  border-style: solid;
 border-bottom: 0cm;
}
.contact {
 right: 10%;
background-color: #ececec;
}
.blog {
  right: calc(10% + 153px);
 background-color: #00bf63;
.weather {
 right: calc(10% + 306px);
 background-color: #00bf63;
}
.home {
  right: calc(10% + 459px);
```

```
background-color: #00bf63;
/* Main body */
.title {
 position: absolute;
 top: 125px;
 font-size: 50px;
 font-family: Arial, Helvetica, sans-serif;
 width: 100%;
 text-align: center;
  position: absolute;
 top: 185px;
 font-size: 25px;
 font-family: Arial, Helvetica, sans-serif;
 text-align: center;
 width: 30%;
 left: 35%;
.form {
  position: absolute;
 top: 350px;
 width: 80%;
 left: 10%;
 height: calc(95% - 350px);
 background-color: #7EF297;
 border-radius: 50px;
 border-color: #253031;
  border-width: 4px;
 border-style: solid;
}
.reply_email {
  position: absolute;
 top: 50px;
 left: 50px;
 height: 20px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 18px;
 width: calc(60% - 50px);
 background-color: #ececec;
}
.name {
  position: absolute;
 top: 50px;
```

```
right: 50px;
  height: 20px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 18px;
 width: calc(40% - 80px);
 background-color: #ececec;
}
.subject {
  position: absolute;
  top: 90px;
 left: 50%;
  transform: translateX(-50%);
 height: 20px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 18px;
 width: 50%;
background-color: #ececec;
}
.email_body {
  position: absolute;
 top: 130px;
  left: 50%;
 transform: translateX(-50%);
  height: 50%;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 18px;
 width: 90%;
 resize: none;
 background-color: #ececec;
}
.Send {
  position: absolute;
  bottom: 50px;
  right: 100px;
 width: 130px;
  height: 50px;
 border-radius: 100px;
  background-color: #00bf63;
 color: white;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 30px;
 border-color: #253031;
}
.Message {
  position: absolute;
  left: 50px;
 bottom: 50px;
```

```
width: 300px;
 height: 20px;
 transform: translateY(250px);
/static/home.css
body {
  background-color: #ececec;
 font-family: Arial, Helvetica, sans-serif;
/* Navbar */
.navbar {
 background-color: #7EF297;
 width: 100%;
 height: 100px;
 position: fixed;
 top: 0%;
  left: 0%;
 border-bottom-color: #253031;
  border-bottom-width: 3px;
 border-bottom-style: solid;
}
.navbar > a {
 color: black;
 top: 68px;
 height: 30px;
 position: fixed;
 font-family: Arial, Helvetica, sans-serif;
 width: 146px;
  text-align: center;
  text-decoration: none;
  border-width: 2px;
  border-color: #253031;
  border-style: solid;
 border-bottom: 0cm;
}
.contact {
 right: 10%;
background-color: #00bf63;
}
.blog {
 right: calc(10% + 153px);
 background-color: #00bf63;
}
```

```
.weather {
 right: calc(10% + 306px);
background-color: #00bf63;
.home {
 right: calc(10% + 459px);
background-color: #ececec;
}
/* Main body */
.sungraphic {
 position: absolute;
 bottom: 0%;
 width: max(300px,30%);
 left: calc(25% - max(150px,15%));
}
.about {
  position: absolute;
 top: 150px;
 width:40%;
 left: 5%;
 text-align: center;
 font-family: Arial, Helvetica, sans-serif;
.description {
 top: 250px;
 position: absolute;
 width: 440px;
 left: calc(25% - 220px);
 text-align: center;
 font-family: Arial, Helvetica, sans-serif;
.gobutton {
  position: absolute;
  top: 400px;
 color: white;
 background-color: #00bf63;
 width: 150px;
 border-radius: 1000px;
 left: calc(25% - 75px);
 height: 50px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 25px;
}
/* Featured Blog */
.featured-article-outer {
```

```
position: absolute;
  width: 45%;
 right: 25%;
  transform: translateX(50%);
  border-radius: 50px;
  border-width: 3px;
 border-color: #253031;
 border-style: solid;
 background-color: #00bf63;
 height: calc(100% - 200px);
 top: 150px;
}
.featured-article-outer > h2 {
  position: absolute;
 width: 100%;
 top: 10px;
 font-size: 30px;
 text-align: center;
}
.featured-article-inner {
  position: absolute;
  width: calc(100% - 50px);
  bottom: 25px;
  border-radius: 25px;
  border-width: 2px;
  border-color: #253031;
 border-style: solid;
 background-color: #7EF297;
 left: 25px;
 top: 100px;
}
.title_{
  position: absolute;
 width: 100%;
 top: 0px;
 font-size: 25px;
 text-align: center;
}
.image {
 position: absolute;
 height: 25%;
 top: 75px;
 left: 50%;
 transform: translateX(-50%);
.preview {
```

```
position: absolute;
  top: calc(100px + 25%);
 width: 80%;
 text-align: center;
 left: 50%;
 transform: translateX(-50%);
 font-size: 18px;
}
.blog-button {
  position: absolute;
  color: white;
  background-color: #00bf63;
 width: 150px;
 border-radius: 1000px;
 height: 50px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 25px;
 bottom: 25px;
 left: 50%;
 transform: translateX(-50%);
/static/view.css
body {
 background-color: #ececec;
font-family: Arial, Helvetica, sans-serif;
}
/* Navbar */
.navbar {
  background-color: #7EF297;
 width: 100%;
 height: 100px;
 position: fixed;
 top: 0%;
 left: 0%;
 z-index: 9999;
 border-bottom-color: #253031;
 border-bottom-width: 3px;
 border-bottom-style: solid;
}
.navbar > a {
 color: black;
  top: 68px;
 height: 30px;
 position: fixed;
 font-family: Arial, Helvetica, sans-serif;
```

```
width: 146px;
  text-align: center;
 text-decoration: none;
  border-width: 2px;
 border-color: #253031;
 border-style: solid;
 border-bottom: 0cm;
}
.contact {
  right: 10%;
 background-color: #00bf63;
.blog {
  right: calc(10% + 153px);
 background-color: #ececec;
}
.weather {
 right: calc(10% + 306px);
 background-color: #00bf63;
.home {
  right: calc(10% + 459px);
 background-color: #00bf63;
}
/* Main body */
.Content {
 position: absolute;
 top: 125px;
/static/weather.css
body {
 background-color: #ececec;
}
/* Navbar */
.navbar {
  background-color: #7EF297;
  width: 100%;
  height: 100px;
 position: fixed;
  top: 0%;
  left: 0%;
```

```
border-bottom-color: #253031;
  border-bottom-width: 3px;
 border-bottom-style: solid;
.navbar > a {
 color: black;
 top: 68px;
 height: 30px;
  position: fixed;
  font-family: Arial, Helvetica, sans-serif;
  width: 146px;
  text-align: center;
 text-decoration: none;
 border-width: 2px;
 border-color: #253031;
 border-style: solid;
border-bottom: 0cm;
}
.contact {
  right: 10%;
 background-color: #00bf63;
.blog {
 right: calc(10% + 153px);
 background-color: #00bf63;
}
.weather {
 right: calc(10% + 306px);
background-color: #ececec;
}
.home {
 right: calc(10% + 459px);
 background-color: #00bf63;
}
/* Main body */
/* Weather */
.Weather-title > h1 {
 position: absolute;
 top: 100px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 33px;
 width: 300px;
 text-align: center;
```

```
.Weather-title > h3 {
  position: absolute;
  top: 113px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 20px;
 left: 300px;
 width: 150px;
 text-align: center;
}
.Location {
  position: absolute;
 top: 113px;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 20px;
 right: 20px;
}
.Weather-body {
 position: absolute;
width: 100%;
.Weather-body > div {
  position: absolute;
 top: 170px;
  background-color: #7EF297;
 border-color: #253031;
 border-width: 2px;
 border-top-width: 0px;
 border-bottom-width: 0px;
 border-style: solid;
 width: max(8%,102px);
.Weather-body > div > h6 {
  font-family: Arial, Helvetica, sans-serif;
  text-align: center;
 font-size: 20px;
 padding-top: 2px;
 margin-top: 2px;
 padding-bottom: 2px;
 margin-bottom: 2px;
}
.Weather-body > div > img {
  display: block;
 margin-left: auto;
 margin-right: auto;
 width: 100px;
```

```
}
/* Individual forecast sections */
.Hour4 {
 right: 50%;
}
.Hour5 {
 left: 50%;
}
.Hour3 {
 right: calc(50\% + max(8\%, 102px) + 4px)
.Hour6 {
 left: calc(50% + max(8\%, 102px) + 4px)
.Hour2 {
 right: calc(50% + (2 * max(8%,102px)) + 8px)
}
.Hour7 {
 left: calc(50% + (2 * max(8%,102px)) + 8px)
.Hour1 {
 right: calc(50\% + (3 * max(8\%, 102px)) + 12px)
.Hour8 {
 left: calc(50% + (3 * max(8%,102px)) + 12px)
.Hour0 {
 right: calc(50% + (4 * max(8%,102px)) + 16px)
.Hour9 {
 left: calc(50% + (4 * max(8%,102px)) + 16px)
}
/* Pollen */
.Pollen-title {
  position: absolute;
  top: 40%;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 33px;
  width: 300px;
 text-align: center;
}
.Pollen > h3 {
  position: absolute;
  font-family: Arial, Helvetica, sans-serif;
  width: 50px;
```

```
height: 50px;
  border-color: #00bf63;
 border-style: solid;
 border-width: 10px;
 text-align: center;
 border-radius: 100%;
padding: 50px;
}
.Pollen-Grass {
  top: calc(50% + 30px);
 left: 75px;
.Pollen-Trees {
 top: calc(50% + 30px);
 left: 275px;
}
.Pollen-Weeds {
 top: calc(50% + 210px);
 left: 175px;
/* Air quality */
.Air-Q-title > h1 {
 position: absolute;
 top: 40%;
 font-family: Arial, Helvetica, sans-serif;
 font-size: 33px;
 width: 300px;
 text-align: center;
 right: calc(50% + 100px);
}
.Air-Q-title > h2 {
 position: absolute;
  top: calc(40% + 16px);
 font-family: Arial, Helvetica, sans-serif;
 font-size: 20px;
 right: calc(50% - 160px);
 width: 350px;
 text-align: center;
}
.Air-Q > h3 {
  position: absolute;
  font-family: Arial, Helvetica, sans-serif;
  text-align: center;
```

```
right: calc(50\% + 90px);
 transform: translateX(50%);
}
.Year0 {
 top: 50%;
 font-size: 30px;
}
.Year1 {
 top: calc(50% + 70px);
 font-size: 23px;
.Year2 {
 top: calc(50% + 123px);
 font-size: 23px;
}
.Year3 {
  top: calc(50% + 176px);
 font-size: 23px;
}
.Year4 {
  top: calc(50% + 229px);
 font-size: 23px;
.Copyright {
  top: calc(50% + 282px);
 font-size: 10px;
 width: 300px;
}
/* Advice */
.Advice > h1 {
  position: absolute;
  top: 40%;
  font-family: Arial, Helvetica, sans-serif;
  font-size: 33px;
  width: 300px;
  text-align: center;
 left: calc(50% + 100px);
.Advice > div > h2 {
  position: absolute;
  font-family: Arial, Helvetica, sans-serif;
  font-size: 25px;
  text-align: left;
  width: 400px;
  left: calc(50% + 200px);
```

```
}
.help0 > h2 {
 top: 50%;
}
.help1 > h2 {
top: calc(50% + 130px);
.help2 > h2 {
 top: calc(50% + 260px);
}
.Advice > div > p {
  position: absolute;
  font-family: Arial, Helvetica, sans-serif;
 font-size: 20px;
 text-align: left;
  width: 33%;
 left: calc(50% + 200px);
}
.help0 > p {
 top: calc(50% + 50px);
.help1 > p {
 top: calc(50% + 180px);
.help2 > p {
 top: calc(50% + 310px);
/static/admin.js
// get current contact email
function get_contact_email() {
  fetch('/admin/email').then(response => response.json()).then(data => {
    document.querySelector('.current-email').innerHTML = 'Currently ' +
data['email']
 })
}
// assemble a post object on the html
const post_space = document.querySelector('.existing-posts')
function create_post(json, index) {
  let post div = document.createElement('div')
  let classname = 'post' + index
  post_div.setAttribute('class', classname)
  let distance = (index * 178) + 70
  post_div.style.top = distance + 'px'
 post_space.appendChild(post_div)
```

```
let title = document.createElement('h3')
 classname = 'title' + index
  title.setAttribute('class', classname)
 title.innerHTML = json['title']
 post_div.appendChild(title)
  let image = document.createElement('img')
 classname = 'img' + index
  image.setAttribute('class', classname)
  image.setAttribute('src',json['image'])
  post_div.appendChild(image)
  let button = document.createElement('button')
  classname = 'button' + index
  button.setAttribute('class', classname)
  let command = 'UpdateMode(' + json['timestamp'] + ')'
  button.setAttribute('onclick', command)
  button.innerHTML = 'Update'
 post div.appendChild(button)
}
// get all blog posts so they are ready to be chosen for update
function get_all_posts() {
  fetch('/blog/all').then(response => response.json()).then(data => {
    // iterate through each blog post assembling the structure
    // first declare a bunch of needed variables
    let posts = data['all_posts']
    let post_json = {}
   for (i = 0; i < posts.length; i++) {
    post_json = posts[i]
     // create the post
     create_post(post_json, i)
// this function is directly from MDN Web Docs, and is free to use for sha-256
hashing strings
async function digestMessage(message) {
 const msgUint8 = new TextEncoder().encode(message); // encode as (utf-8)
Uint8Array
 const hashBuffer = await crypto.subtle.digest("SHA-256", msgUint8); // hash the
 const hashArray = Array.from(new Uint8Array(hashBuffer)); // convert buffer to
byte array
 const hashHex = hashArray
   .map((b) => b.toString(16).padStart(2, "0"))
```

```
.join(""); // convert bytes to hex string
 return hashHex;
}
// check password, if correct reveal everything else
function checkpass() {
  let password = document.querySelector('.pword_entry').value
  digestMessage(password).then(hash => {
    console.log(hash)
    let body = {
      hash: hash
    // send to /passcheck
    fetch('/passcheck', {
      method: 'POST',
     headers: {
        'Content-Type': 'application/json;charset=utf-8'
      body: JSON.stringify(body)
    .then(response => response.json())
    // handle response
    .then(data => {
      if (data['message'] == 'Correct password') {
        console.log(data)
        // hide the password entry
        document.querySelector('.password').style.display = 'none'
        // show everything else
        document.querySelector('.main').style.display = 'inline'
// update the password
function changepass() {
  document.querySelector('.response').innerHTML = 'Please wait...'
  let password1 = document.querySelector('.new_pword_entry1').value
  let password2 = document.querySelector('.new_pword_entry2').value
 if (password1 == password2) {
    digestMessage(password1).then(hash => {
   console.log(hash)
      let body = {
        hash: hash
```

```
// send to /admin/password
      fetch('/admin/password'<u>,</u> {
        method: 'POST',
        headers: {
          'Content-Type': 'application/json; charset=utf-8'
        body: JSON.stringify(body)
      .then(response => response.json())
      // handle response
      .then(data => {
        document.querySelector('.response').innerHTML = data['message']
        document.querySelector('.new_pword_entry1').value = ''
        document.guerySelector('.new pword entry2').value = ''
  } else {
  document.querySelector('.response').innerHTML = 'Passwords do not match.'
// change destination email for contact
function changeemail() {
  document.querySelector('.response').innerHTML = 'Please wait...'
  let email = document.querySelector('.email').value
  // validation - '@' present, only one '@', at least one '.' after the '@'
 valid_email = (email.indexOf('@') > -1) && (email.split('@').length == 2) &&
(email.split('@').pop().indexOf('.') > -1)
 if (valid email) {
    // send POST request
   let body = {
     email: email
    // send to /admin/email
    fetch('/admin/email', {
      method: 'POST',
      headers: {
        'Content-Type': 'application/json;charset=utf-8'
      body: JSON.stringify(body)
    .then(response => response.json())
    // handle response
    .then(data => {
      document.querySelector('.response').innerHTML = data['message']
```

```
document.querySelector('.email').value = ''
      get_contact_email()
    })
  } else {
    document.querySelector('.response').innerHTML = 'Please enter a valid email'
}
// upload blog post to backend
function createpost(update) {
  document.querySelector('.response').innerHTML = 'Please wait...'
  // get values, cancel if empty
  let title = document.querySelector('.title').value
  if (title == '') {
    document.querySelector('.response').innerHTML = 'Please enter a title.'
   return
  let image_url = document.querySelector('.image-url').value
  if (image_url == '') {
    document.querySelector('.response').innerHTML = 'Please enter an image URL.'
    return
  let preview = document.querySelector('.preview').value
  if (preview == '') {
   document.querySelector('.response').innerHTML = 'Please enter some preview
text'
   return
  let html = document.querySelector('.post-body').value
 if (html == '') {
    document.querySelector('.response').innerHTML = 'Please enter the blog
contents'
   return
 let timestamp = 0
  // get the timestamp
  if (update == false) {
    timestamp = Date.now()
  } else {
    timestamp = update
  // assemble into POST request body
  body = {
    title: title,
    image: image_url,
```

```
preview: preview,
    html: html,
    timestamp: timestamp
  // send request to /admin/create
  fetch('/admin/create', {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json; charset=utf-8'
    body: JSON.stringify(body)
  .then(response => response.json())
  // handle response
  .then(data => {
    document.querySelector('.response').innerHTML = data['message']
   get_all_posts()
// swap to update mode
function UpdateMode(timestamp) {
  console.log(timestamp) //debug
  // get the blog details
  fetch_url = '/getblog/' + timestamp
  fetch(fetch_url).then(response => response.json()).then(data => {
    document.querySelector('.title').value = data['title']
    document.querySelector('.image-url').value = data['image']
    document.querySelector('.preview').value = data['preview']
    document.guerySelector('.post-body').value = data['html']
  // other changes
  document.querySelector('.blog-editor-title').innerHTML = 'Update this post'
  document.guerySelector('.create-post').innerHTML = 'Update post'
  let command = 'createpost(' + timestamp + ')'
  document.querySelector('.create-post').setAttribute('onclick', command)
 document.querySelector('.clear-blog').innerHTML = 'Back to creation'
}
// clear the contents (or go back to creation mode)
function clearblog() {
  document.querySelector('.title').value = ''
  document.querySelector('.image-url').value = ''
  document.querySelector('.preview').value = ''
  document.querySelector('.post-body').value = ''
  document.querySelector('.blog-editor-title').innerHTML = 'Create a new blog post'
```

```
document.querySelector('.create-post').innerHTML = 'Create post'
 document.querySelector('.create-post').setAttribute('onclick',
 createpost(false)')
 document.querySelector('.clear-blog').innerHTML = 'Clear'
}
// run automatically
get_contact_email()
get all posts()
/static/blog.js
// redirect to the view page with the timestamp in the URL so it can be used on the
other side
function goToPage(timestamp) {
 let local_url = '/blog/view/' + timestamp
 window.location.href = local_url
}
// function to create a blog post preview object given its json and index
const posts_div = document.querySelector('.posts')
function create_post(json, index) {
  let post div = document.createElement('div')
 let classname = 'post' + index
  post_div.setAttribute('class', classname)
  let distance = (index * 400) + 150
  post div.style.top = distance + 'px'
  posts div.appendChild(post div)
  let title = document.createElement('h3')
  classname = 'title' + index
  title.setAttribute('class', classname)
  title.innerHTML = json['title']
 post div.appendChild(title)
  let image = document.createElement('img')
  classname = 'img' + index
  image.setAttribute('class', classname)
 image.setAttribute('src',json['image'])
 post div.appendChild(image)
  let preview = document.createElement('p')
 classname = 'prev' + index
  preview.setAttribute('class', classname)
  preview.innerHTML = json['preview']
  post div.appendChild(preview)
  let button = document.createElement('button')
```

```
classname = 'button' + index
  button.setAttribute('class', classname)
  let command = 'goToPage(' + json['timestamp'] + ')'
  button.setAttribute('onclick', command)
 button.innerHTML = 'View <img src="static\\site\\go-arrow.png">'
 post_div.appendChild(button)
}
// get all blog posts
fetch('/blog/all').then(response => response.json()).then(data => {
  // debug - see test log for what was being tested
  console.log(data)
  // remove the loading text
 document.querySelector('.loading').style.display = 'none'
  // iterate through each blog post assembling the structure
  // first declare a bunch of needed variables
 let posts = data['all_posts']
 let post_json = {}
 for (i = 0; i < posts.length; i++) {
   post_json = posts[i]
    // create the post
   create_post(post_json, i)
/static/contact.js
// function for sending request to send email
function Submit() {
 document.querySelector('.Message').innerHTML = 'Please wait'
  // get values of input fields
  let reply email = document.querySelector('.reply email').value
  let name = document.querySelector('.name').value
  let subject = document.querySelector('.subject').value
  let body = document.querySelector('.email body').value
  // piece together json
  let request body = {
  reply_email: reply_email,
    name: name,
   subject: subject,
    body: body
  // send to /contact/send
 fetch('/contact/send', {
```

```
method: 'POST',
    headers: {
      'Content-Type': 'application/json;charset=utf-8'
   body: JSON.stringify(request_body)
  .then(response => response.json()).then(data => {
  document.querySelector('.Message').innerHTML = data['message']
})
/static/home.js
function goNow() {
window.location.href = '/weather'
}
// redirect to the view page with the timestamp in the URL so it can be used on the
other side
function goToPage(timestamp) {
  let local_url = '/blog/view/' + timestamp
window.location.href = local url
}
// get the last blog post to show in a featured article
fetch('/lastblog').then(response => response.json()).then(data => {
  console.log(data)
  document.querySelector('.title').innerHTML = data['title']
 document.querySelector('.image').setAttribute('src', data['image'])
  document.querySelector('.preview').innerHTML = data['preview']
  let command = 'goToPage(' + data['timestamp'] + ')'
 document.querySelector('.blog-button').setAttribute('onclick',command)
})
/static/view.js
//get the timestamp from the URL
const timestamp = (window.location.pathname).split('/').pop()
console.log(timestamp)
// get the blog contents
fetch_url = '/getblog/' + timestamp
fetch(fetch_url).then(response => response.json()).then(data => {
  console.log(data)
 // show the HTML from the response
 document.querySelector('.Content').innerHTML = data['html']
})
```

```
/static/weather.js
// OPENWEATHER IMAGES FOR FORECAST ARE AT
// https://openweathermap.org/img/wn/<id>@2x.png
var latitude = 0
var longitude = 0
// get location - automatically asks permission
navigator.geolocation.getCurrentPosition(function(position) {
  latitude = position.coords.latitude;
 longitude = position.coords.longitude;
})
// build http request body
let body = {
  longitude: longitude,
 latitude: latitude,
 time: Date.now()
}
let data = {}
// send a request to main.py for the weather data
fetch('/weather/content', {
  method: 'POST',
 headers: {
    'Content-Type': 'application/json; charset=utf-8'
 body: JSON.stringify(body)
.then(response => response.json())
// handle response
.then(data => {
let full_location = (data.location[0] + ', ' + data.location[1])
document.querySelector('.Location').innerHTML = full_location
// times, temperatures, and images
let times = Object.keys(data['forecast'])
let time = ''
```

// this is as Now is at the end of the json

img_code = data['forecast']['Now']['type']

time = 'Now'

```
temp = data['forecast']['Now']['temp']
object_name = '.Hour0'
document.querySelector(object_name).innerHTML = '<h6 class="Time0">Now</h6><img</pre>
src="https://openweathermap.org/img/wn/'+img_code+'@2x.png"><h6</pre>
class="Temp0">'+temp+'°C</h6>'
// iterate the rest
for (i=0; i<9; i++) {
 time = times[i]
  img code = data['forecast'][time]['type']
  temp = data['forecast'][time]['temp']
 object name = '.Hour'+(i+1)
 document.querySelector(object_name).innerHTML = '<h6</pre>
class="Time0">'+time+'</h6><img
src="https://openweathermap.org/img/wn/'+img_code+'@2x.png"><h6</pre>
class="Temp0">'+temp+'°C</h6>'
// pollen
const green = '#00c51b'
const yellow = '#ff9900'
const red = '#ff0000'
const purple = '#830b4a'
let grass = document.querySelector('.Pollen-Grass')
let trees = document.querySelector('.Pollen-Trees')
let weeds = document.querySelector('.Pollen-Weeds')
grass.innerHTML = 'Grass '+ data['pollen']['grass'] +'ppm'
trees.innerHTML = 'Trees '+ data['pollen']['trees'] +'ppm'
weeds.innerHTML = 'Weeds '+ data['pollen']['weeds'] +'ppm'
// the numbers for the colour change come from the table on Kleenex Pollen Pal
// trees colour change
if (data['pollen']['trees'] < 96) {</pre>
trees.style.borderColor = green
} else if (data['pollen']['trees'] < 208) {
 trees.style.borderColor = yellow
} else if (data['pollen']['trees'] < 704) {</pre>
 trees.style.borderColor = red
} else {
trees.style.borderColor = purple
// grass colour change
if (data['pollen']['grass'] < 30) {
grass.style.borderColor = green
} else if (data['pollen']['grass'] < 61) {</pre>
 grass.style.borderColor = yellow
```

```
} else if (data['pollen']['grass'] < 342) {</pre>
 grass.style.borderColor = red
} else {
 grass.style.borderColor = purple
}
// weeds colour change
if (data['pollen']['weeds'] < 21) {
 weeds.style.borderColor = green
} else if (data['pollen']['weeds'] < 78) {</pre>
 weeds.style.borderColor = yellow
} else if (data['pollen']['weeds'] < 267) {</pre>
 weeds.style.borderColor = red
} else {
 weeds.style.borderColor = purple
}
// pollution
let target = ''
for (i=0;i<5;i++) {
 target = '.Year' + i
 document.querySelector(target).innerHTML = data['pollution'][i]['year'] +
'&nbsp&nbsp&nbsp' + data['pollution'][i]['value'] + '
}
// advice
for (i=0;i<3;i++) {
 target = '.help' + i
 document.querySelector(target).innerHTML = '<h2>'+data['advice'][i]['title']
+'</h2>'+data['advice'][i]['description']+''
});
/templates/admin.html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group | Admin</title>
  <link rel="stylesheet" href="{{url_for('static',filename='admin.css')}}">
 <link rel="shortcut icon" href="{{ url_for('static', filename='favicon.ico') }}"</pre>
</head>
<body>
 <div class="navbar">
```

```
<img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
    <a class="blog" href="/blog">Blog</a>
    <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
 </div>
 <!--Password check-->
 <div class="password">
   Password:
    <input class="pword entry" type="password">
    <button onclick="checkpass()">Submit</button>
 </div>
  <!--Main tools-->
  <div class="main">
    <!--Change password-->
    <div class="password-change">
      <h2>Update Password</h2>
      <div>
        <label for="new pword entry1">New password:</label>
        <input class="new_pword_entry1" type="password" id="new_pword_entry1"</pre>
minlength="1" placeholder="Password">
      </div>
      <div>
        <label for="new_pword_entry2">Confirm:</label>
        <input class="new pword entry2" type="password" id="new pword entry2"</pre>
placeholder="Password">
      </div>
      <button onclick="changepass()">Change</button>
   </div>
    <div class="email-change">
      <h2>Contact Email</h2>
       <label class="current-email">Currently</label>
      </div>
      <div>
        <label for="email">New email:</label>
        <input class="email" type="email" id="email" inputmode="email"</pre>
placeholder="Email">
      </div>
     <button onclick="changeemail()">Change</button>
   </div>
    <!--Blog editing-->
    <div class="blog-list">
    </div>
    <div class="blog-editor">
      <h1 class="blog-editor-title">Create a new blog post</h1>
      <label for="title" class="title-label">Title:</label>
```

```
<input type="text" class="title" id="title" placeholder="Top 10 Clever Blog</pre>
Post Titles">
      <label for='image-url' class="image-url-label">Image URL:</label>
      <input type="url" class="image-url" id="image-url"</pre>
placeholder="http://www.example.com/image.png">
      <label for="preview" class="preview-label">Preview text:</label>
      <textarea class="preview" id="preview" placeholder="What the user sees before</pre>
clicking on the post"></textarea>
      <label for="post-body" class="post-body-label">Body (HTML):</label>
      <textarea class="post-body" id="post-body" placeholder="Only include the</pre>
inside of the <body> tag."></textarea>
      <button onclick="createpost(false)" class="create-post">Create post</button>
      <button onclick="clearblog()" class="clear-blog">Clear</button>
    </div>
    <!--Area for available posts to update-->
    <div class="existing-posts">
    <h2>Update a post</h2>
   </div>
   <!--Message popup-->
    Welcome
 </div>
 <script src="{{url for('static',filename='admin.js')}}"></script>
</body>
</html>
/templates/blog.html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group - Blog</title>
  <link rel="stylesheet" href="{{url_for('static',filename='blog.css')}}">
 <link rel="shortcut icon" href="{{ url for('static', filename='favicon.ico') }}"</pre>
</head>
<body>
 <div class="navbar">
    <img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
    <a class="blog" href="/blog">Blog</a>
    <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
  </div>
 <h1 class="loading">Loading blog, please wait...</h1>
```

```
<div class="posts">
   <!--The blog posts are created in here by blog.js-->
 <script src="{{url_for('static',filename='blog.js')}}"></script>
</body>
</html>
/templates/contact.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group | Contact</title>
 <link rel="stylesheet" href="{{url for('static',filename='contact.css')}}">
 <link rel="shortcut icon" href="{{ url for('static', filename='favicon.ico') }}"</pre>
/>
</head>
<body>
  <div class="navbar">
    <img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
   <a class="blog" href="/blog">Blog</a>
   <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
 </div>
 <h1 class="title">Contact Us</h1>
 Have a question about what we do? Need some more specific advice but can't
find it anywhere?<br>Send us an email!
  <!-- form -->
 <div class="form">
    <input class="reply_email" value="Email" type="text">
    <input class="name" value="Name" type="text">
    <input class="subject" value="Subject" type="text">
    <textarea class="email_body">Body</textarea>
   <button class="Send" onclick="Submit()">Send <img src="static\site\go-</pre>
arrow.png"></button>
 </div>
 <script src="{{url_for('static',filename='contact.js')}}"></script>
</body>
/templates/home.html
```

<!DOCTYPE html>
<html lang="en">

```
<head>
  <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group | Home</title>
 <link rel="stylesheet" href="{{url_for('static',filename='home.css')}}">
 <link rel="shortcut icon" href="{{ url for('static', filename='favicon.ico') }}"</pre>
</head>
<body>
  <div class="navbar">
    <img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
    <a class="blog" href="/blog">Blog</a>
    <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
 </div>
 <h1 class="about">Find weather and pollen where you are.</h1>
 Our simple weather tracking tool allows you to see the
weather forecasts, pollen counts, and air quality data for where you are. All it
takes is a couple clicks!
  <img class="sungraphic" src="/static/site/sun.png" alt="sun">
 <button type="button" onclick="goNow()" class="gobutton">Go Now <img</pre>
src="static\site\go-arrow.png"></button>
  <!--Featured Article-->
  <div class="featured-article-outer">
    <h2>Featured Blog</h2>
    <div class="featured-article-inner">
     <h3 class="title">Loading</h3>
      <img class="image" src="" alt="Please wait">
     Please wait
      <button class="blog-button" onclick="goToPage()">View <img</pre>
src="static\site\go-arrow.png"></button>
    </div>
  </div>
 <script src="{{url for('static',filename='home.js')}}"></script>
</body>
</html>
/templates/view.html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group | Blog</title>
  <link rel="stylesheet" href="{{url_for('static',filename='view.css')}}">
 <link rel="shortcut icon" href="{{ url for('static', filename='favicon.ico') }}"</pre>
```

```
</head>
<body>
  <div class="navbar">
    <img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
   <a class="blog" href="/blog">Blog</a>
    <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
  </div>
  <div class="Content">
   <!--The custom stuff sits in here so the CSS can be changed slightly and it
looks nice-->
 </div>
 <script src="{{url_for('static',filename='view.js')}}"></script>
/templates/weather.html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>Health Advice Group | Weather</title>
 <link rel="stylesheet" href="{{url_for('static',filename='weather.css')}}">
 <link rel="shortcut icon" href="{{ url_for('static', filename='favicon.ico') }}"</pre>
</head>
<body>
  <div class="navbar">
    <img src="/static/site/logo.png" alt="logo">
    <a class="home" href="/">Home</a>
    <a class="blog" href="/blog">Blog</a>
    <a class="weather" href="/weather">Weather</a>
   <a class="contact" href="/contact">Contact</a>
  </div>
 <div class="Weather-title">
    <h1>Weather Forecast</h1>
   <h3>Next 10 hours</h3>
 </div>
 <h2 class="Location">City, COUNTRY</h2>
 <!--Weather forecast-->
  <div class="Weather-body">
    <div class="Hour0">
      <h6 class="Time0">Now</h6>
      <img src="https://openweathermap.org/img/wn/10d@2x.png">
      <h6 class="Temp0">Now</h6>
```

```
</div>
  <div class="Hour1">
    <h6 class="Time1">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp1">Now</h6>
  </div>
  <div class="Hour2">
    <h6 class="Time2">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp2">Now</h6>
  </div>
  <div class="Hour3">
    <h6 class="Time3">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp3">Now</h6>
  </div>
  <div class="Hour4">
    <h6 class="Time4">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp4">Now</h6>
  </div>
  <div class="Hour5">
    <h6 class="Time5">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp5">Now</h6>
  </div>
  <div class="Hour6">
    <h6 class="Time6">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp6">Now</h6>
  </div>
  <div class="Hour7">
    <h6 class="Time7">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp7">Now</h6>
  </div>
  <div class="Hour8">
    <h6 class="Time8">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp8">Now</h6>
  </div>
  <div class="Hour9">
    <h6 class="Time9">Now</h6>
    <img src="https://openweathermap.org/img/wn/10d@2x.png">
    <h6 class="Temp9">Now</h6>
 </div>
</div>
<script src="{{url for('static',filename='weather.js')}}"></script>
```

```
<div class="Pollen">
    <h1 class="Pollen-title">Pollen Today</h1>
    <h3 class="Pollen-Grass">Grass ppm</h3>
   <h3 class="Pollen-Trees">Trees ppm</h3>
   <h3 class="Pollen-Weeds">Weeds ppm</h3>
 </div>
 <!-- Air quality -->
 <div class="Air-Q">
    <div class="Air-Q-title">
      <h1>Pollution</h1>
      <h2>NO<sub>2</sub> Concentration, Last 5 years</h2>
    </div>
   <h3 class="Year0">2021&nbsp&nbsp&nbsp0.807 µg/m<sup>3</sup></h3>
   <h3 class="Year1">2020&nbsp&nbsp&nbsp0.807 µg/m<sup>3</sup></h3>
   <h3 class="Year2">2019&nbsp&nbsp&nbsp0.807 µg/m<sup>3</sup></h3>
   <h3 class="Year3">2018&nbsp&nbsp&nbsp0.807 µg/m<sup>3</sup></h3>
   <h3 class="Year4">2017&nbsp&nbsp&nbsp0.807 µg/m<sup>3</sup></h3>
   <h3 class="Copyright"><i>© Crown copyright 2021 Defra via uk-air.defra.gov.uk,
licensed under the Open Government Licence.</i>
 </div>
  <!-- Advice -->
  <div class="Advice">
    <h1>Advice</h1>
    <div class="help0">
      <h2>Raining soon</h2>
     Make sure to wear waterproof clothing, or bring an umbrella! Also, keep in
mind that roads can be more slippery when wet.
   </div>
   <div class="help1">
      <h2>High pollen count</h2>
      If you suffer from hay fever, be sure you know the risks and learn to
prevent them.
    </div>
    <div class="help2">
      <h2>Cold temperatures soon</h2>
     Wrap up nice and warm! Additionally, maybe stay at home and keep warm with
a hot water bottle if you can.
   </div>
 </div>
</body>
</html>
```