Assignment 2

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Assignment - 2

Roll No.:- 33124

Aim:- Use GAE launcher to launch the web applications.

Theory:-

Q.1) Mention the Structure of GAE Applications with their file Structure and description?

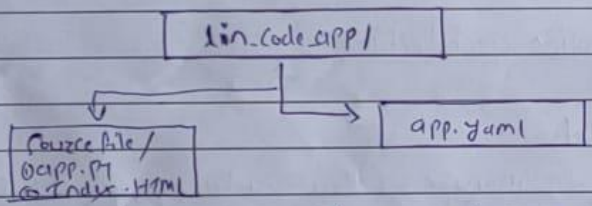
⇒ Directory Structure

→ Each version of your App Engine service is defined in an app.yaml file.

→ ~~File~~ For simple apps, the minimum requirement for development is to define the app.yaml file.

→ The app.yaml acts as a deployment descriptor and defines the scaling type and runtime, handler and other resource settings for a specific version of service.

→ If several versions of a service are to be deployed multiple YAML files can be created in the same directory to represent the configuration for each of the versions.



Directory Diagram

→ My lincode app consists of a single lincode app ~~source~~ service and hence only one app.yaml is used as an deployment descriptor. In case it runs multiple services other files can be included too.

Q2) What are the main components of web application?

⇒

View layer :- It gives an Interface to the application. It is a bridge for getting the data in and out of the application. It does not contain business logic.

Business layer :- It accepts users requests from the browser, process them and determine the routes through which the data will be accessed

Data Access layer :- It keeps the code that is used to pull data from data store like database, flat files or web services Seperate from bussiness logic and presentation code thus avoiding rewriting.

Error handling, security, logging :-
when a web application is built end goal, building, and testing are only focused on for situations when things go right.

Website application architecture :-

Severless Architecture :-
Doesn't need to manage Infrastructures. All the server managm is done by third party service provide like Aws.

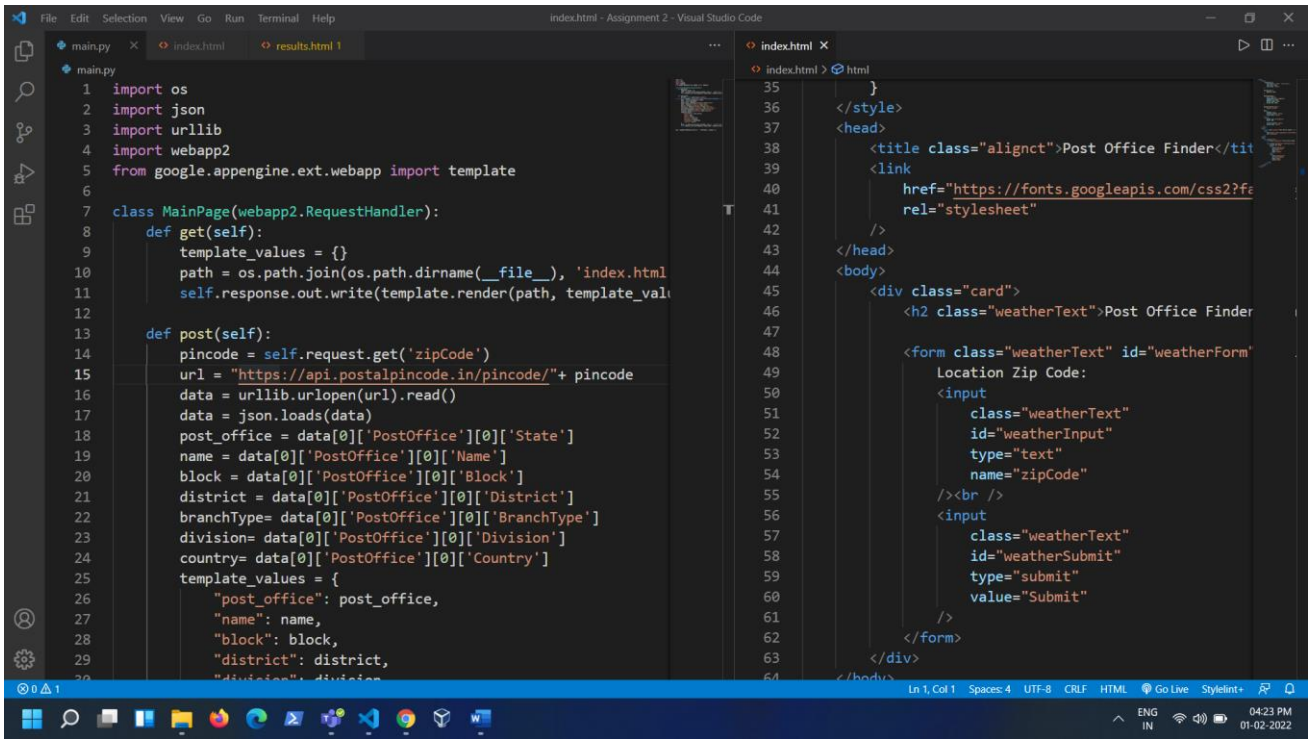
Single page Applications :-
It interferes with the user by dynamically rewriting the current page rather than loading entire new page from a server.

Microservices :
→ Responsible for executing a single functionality
→ Allows developers working with it to not only enhance productivity but also speed up the entire deployment process.

Q3) What is the procedure to develop a simple web application?
⇒ ① Define the problem
② Plan the workflow of your web application.
③ Wireframe your webapplication & receive validation.
④ Choose the tech stack to be used in your app & start building your application based on design.
⑤ Test application after regular interval of time.
⑥ Host & deploy your web application.

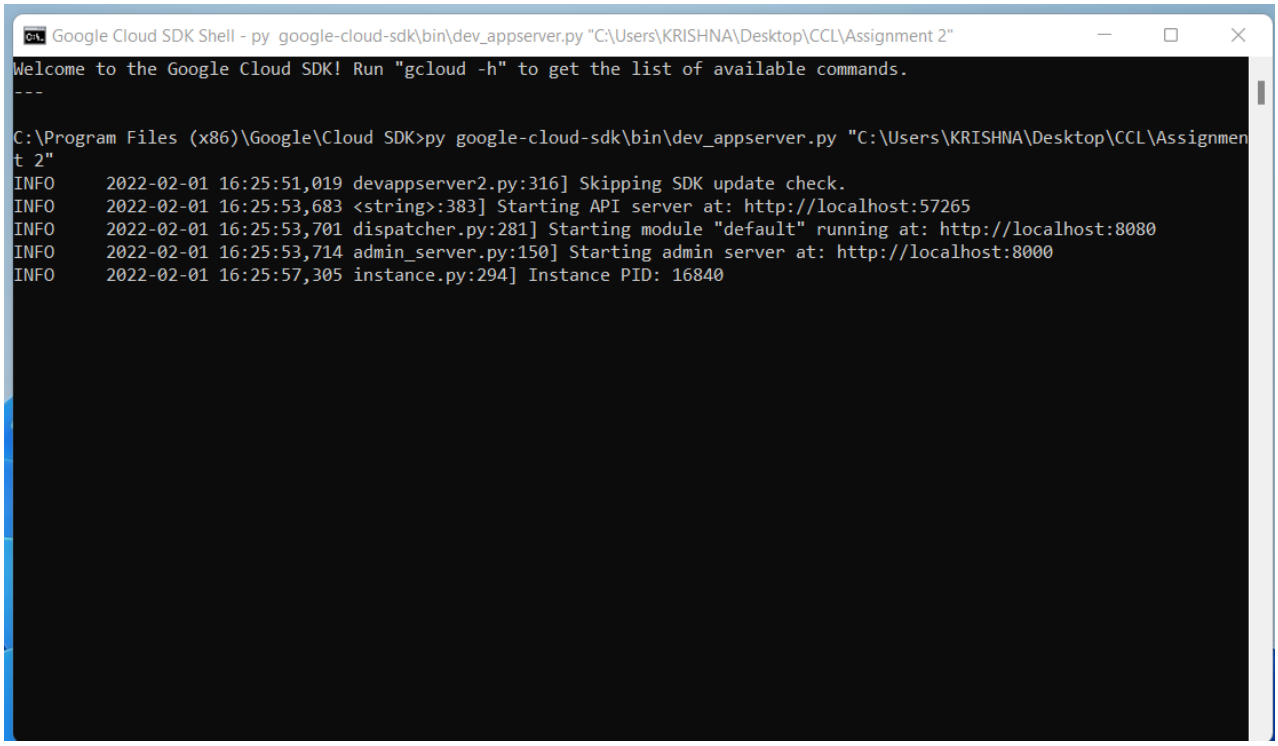
Conclusion :
In this assignment, I learnt about launching web applications using GAE launcher.

Code:



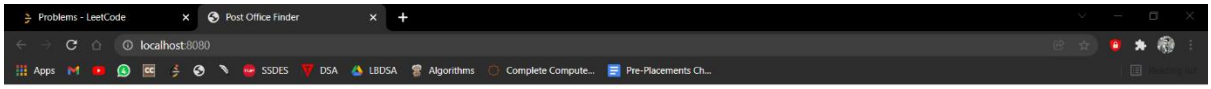
```
import os
import json
import urllib
import webapp2
from google.appengine.ext.webapp import template

class MainPage(webapp2.RequestHandler):
    def get(self):
        template_values = {}
        path = os.path.join(os.path.dirname(__file__), 'index.html
        self.response.out.write(template.render(path, template_val

    def post(self):
        pincode = self.request.get('zipCode')
        url = "https://api.postalpincode.in/pincode/"+ pincode
        data = urllib.urlopen(url).read()
        data = json.loads(data)
        post_office = data[0]['PostOffice'][0]['State']
        name = data[0]['PostOffice'][0]['Name']
        block = data[0]['PostOffice'][0]['Block']
        district = data[0]['PostOffice'][0]['District']
        branchType= data[0]['PostOffice'][0]['BranchType']
        division= data[0]['PostOffice'][0]['Division']
        country= data[0]['PostOffice'][0]['Country']
        template_values = {
            "post_office": post_office,
            "name": name,
            "block": block,
            "district": district,
```

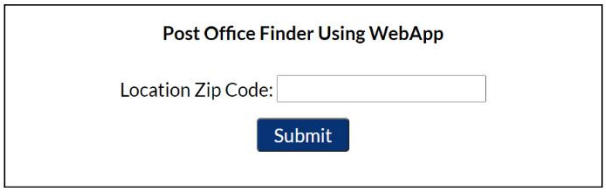
```
    }
</style>
<head>
    <title class="alignct">Post Office Finder</tit
    <link
        href="https://fonts.googleapis.com/css2?fa
        rel="stylesheet"
    />
</head>
<body>
    <div class="card">
        <h2 class="weatherText">Post Office Finder

        <form class="weatherText" id="weatherForm"
            Location Zip Code:
            <input
                class="weatherText"
                id="weatherInput"
                type="text"
                name="zipCode"
            /><br />
            <input
                class="weatherText"
                id="weatherSubmit"
                type="submit"
                value="Submit"
            />
        </form>
    </div>
```



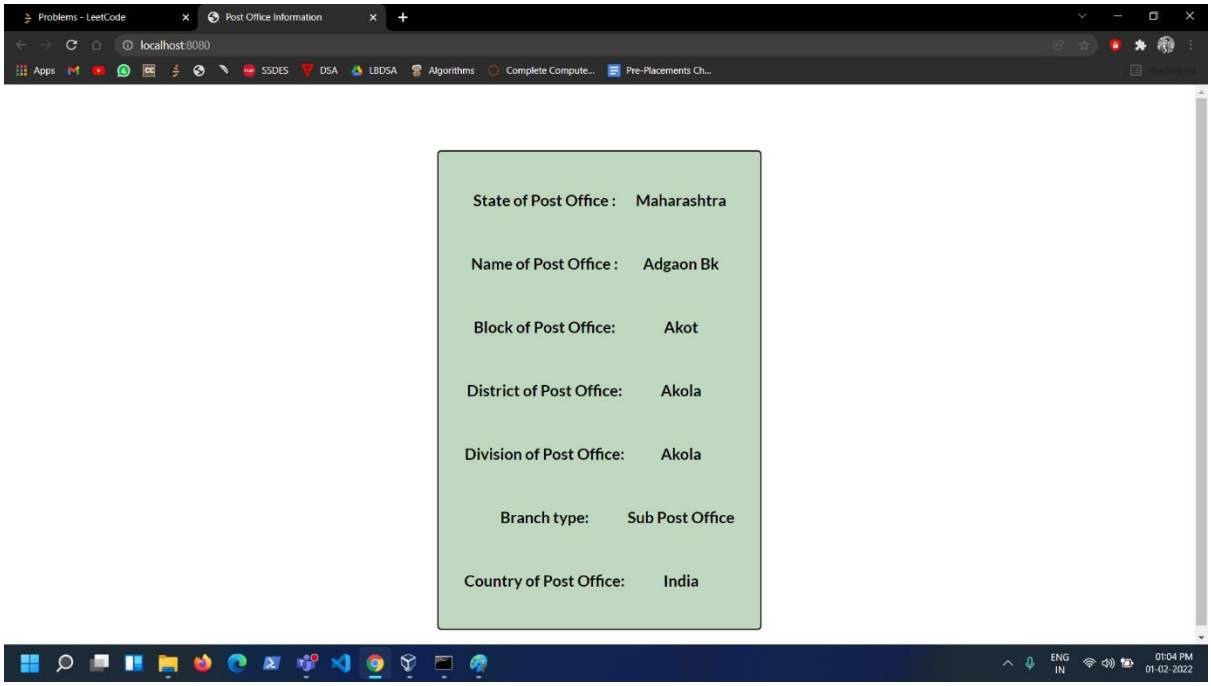
```
Google Cloud SDK Shell - py google-cloud-sdk\bin\dev_appserver.py "C:\Users\KRISHNA\Desktop\CCL\Assignment 2"
Welcome to the Google Cloud SDK! Run "gcloud -h" to get the list of available commands.
---

C:\Program Files (x86)\Google\Cloud SDK>py google-cloud-sdk\bin\dev_appserver.py "C:\Users\KRISHNA\Desktop\CCL\Assignmen
t 2"
INFO     2022-02-01 16:25:51,019 devappserver2.py:316] Skipping SDK update check.
INFO     2022-02-01 16:25:53,683 <string>:383] Starting API server at: http://localhost:57265
INFO     2022-02-01 16:25:53,701 dispatcher.py:281] Starting module "default" running at: http://localhost:8080
INFO     2022-02-01 16:25:53,714 admin_server.py:150] Starting admin server at: http://localhost:8000
INFO     2022-02-01 16:25:57,305 instance.py:294] Instance PID: 16840
```

Output:


Problems - LeetCode
Post Office Finder
localhost:8080
Apps
SSDES
DSA
LBDSA
Algorithms
Complete Compute...
Pre-Placements Ch...


Post Office Finder Using WebApp
Location Zip Code:
Submit


ENG
IN
01:03 PM
01-02-2022


Problems - LeetCode
Post Office Information
localhost:8080
Apps
SSDES
DSA
LBDSA
Algorithms
Complete Compute...
Pre-Placements Ch...
State of Post Office : Maharashtra
Name of Post Office : Adgaon Bk
Block of Post Office: Akot
District of Post Office: Akola
Division of Post Office: Akola
Branch type: Sub Post Office
Country of Post Office: India
ENG
IN
01:04 PM
01-02-2022