

## EXPERIMENT NO. 2

### Use GAE launcher to launch the web applications

**AIM:** Use GAE launcher to launch the web applications.

**Software Tools :** Python- 2.5.4, Jre-8u201-windows-xp, GoogleCloudSDK Inst, VS Code

**THEORY:** You can use Google App Engine to host a static website.

Static web pages can contain client-side technologies such as HTML, CSS, and JavaScript.

Hosting your static site on App Engine can cost less than using a traditional hosting provider,

as App Engine provides a free tier. Sites hosted on App Engine are hosted on the REGION\_ID .r.appspot.com subdomain, such as [my-project-id].uc r.appspot.com.

After you deploy your site, you can map your own domain name to your App Engine-hosted website. Create a new Cloud Console project or retrieve the project ID of an existing project to use:

Goto the Project page2.

Install and then initialize the Google Cloud SDK. Download the SDK Creating a website to host on Google App Engine Basic structure for the project, this guide uses the following structure for the project:

app.yaml: Configure the settings of your App Engine application.

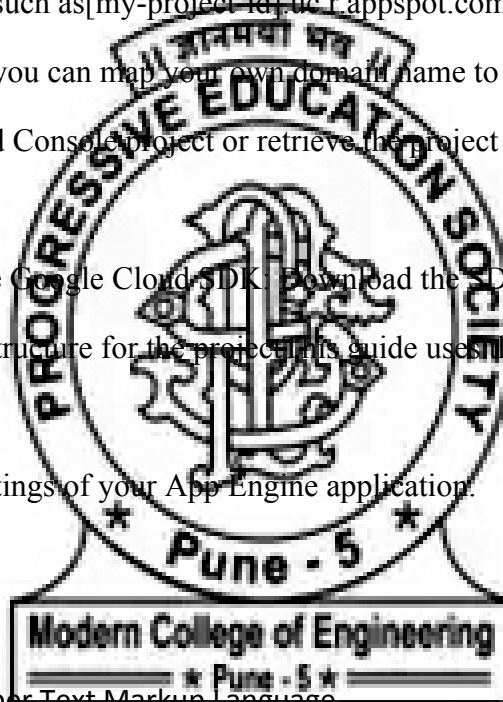
#### Web app designing

##### HTML

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of tags
- **HTML:**
- Hyper Text Markup Language
- Every tag has opening and closing

bracket.

<html>---Opening tag



</html>---closing tag

## STEPS

1) Create one folder on desktop

Ex. TEST

2) Open VS Code and make the following four files: app.yml, main.py, index.html, results.html in VS Code and save them in the folder TEST

1) app.yml (save as YAML)

```
runtime: python27
threadsafe: true
```

```
handlers:
- url: /
  script: main.app
```

2) main.py (save as python)



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

class MainPage(webapp2.RequestHandler):
    def get(self):

        path = os.path.join(os.path.dirname(__file__), "index.html")
        template_values = {}
        self.response.out.write(template.render(path, template_values))

    def post(self):
        pincode = self.request.get('zipCode')
        if not pincode.isnumeric() or not len(pincode) == 6:
            template_values = {
                "error": "Incorrect Pin Code (String / False Code entered)"
            }
            path = os.path.join(os.path.dirname(__file__), 'index.html')
            return self.response.out.write(template.render(path, template_values))
        url = "https://api.postalpincode.in/pincode/" + pincode
        data = urllib.urlopen(url).read()
        data = json.loads(data)
        if(data[0]['Status'] == 'Success'):
            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']
        template_values = {
            "post_office": post_office,
            "name": name,
            "block": block,
            "district": district
        }
        path = os.path.join(os.path.dirname(__file__), 'results.html')
        self.response.out.write(template.render(path, template_values))
    else:
        template_values = {}
        path = os.path.join(os.path.dirname(__file__), 'error.html')
        self.response.out.write(template.render(path, template_values))

app = webapp2.WSGIApplication([('/', MainPage)], debug=True)

```

3) index.html (save as HTML)



```

<html>
<style>
    .weatherText {
        font-family: 'Lato', 'sans-serif';
        font-size: 24px;
        text-align: center;
    }

    #weatherForm {
        padding: 20px;
    }

    #weatherSubmit {
        color: white;
        background-color: #083375;
        padding: 5px 20px;
        border-radius: 5px;
        margin-top: 20px;
    }

    #weatherSubmit:hover {
        cursor: pointer;
    }

    body {
        display: flex;
        justify-content: center;
        align-items: center;
    }

    .card {
        border: 2px solid black;
        width: 50%;
    }

```

```

        justify-content: center;
        align-items: center;
    }
</style>
<head>
    <title class="alignct">Post Office Finder</title>
    <link
href="https://fonts.googleapis.com/css2?family=Lato:wght@400;700&display=swap"
rel="stylesheet"
/>
</head>
<body>
    <div class="card">
        <h2 class="weatherText">Post Office Finder Using WebApp</h2>
        <h1 id="error_head" style="display: none" value="{{error}}">{{error}}</h1>

        <form class="weatherText" id="weatherForm" action="/" method="post">
            Location Zip Code:
            <input
                class="weatherText"
                id="weatherInput"
                type="text"
                name="zipCode"
            /><br />
            <input
                class="weatherText"
                id="weatherSubmit"
                type="submit"
                value="Submit"
            />
            <button
                id="weatherSubmit"
                class="weatherText"
                onclick="document.getElementById(
'weatherInput').value = ''"
            >
                Clear
            </button>
        </form>
    </div>
    <!-- <script>
        let err = document.getElementById('error_head');
        function myFunction() {
            alert('Please Enter the Valid Pin Code!');
        }
        if (err) {
            myFunction();
        }
    </script> -->
</body>

```

```
</html>
```

4) results.html (save as HTML)

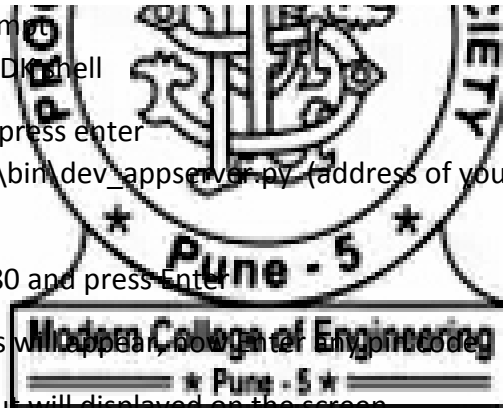
```
<!DOCTYPE html>
<html lang="en">
  <style>
    body {
      display: flex;
      justify-content: center;
      align-items: center;
    }
    #weatherResults {
      background-color: #83e9c2;
      font-family: 'Lato', sans-serif;
      font-size: 24px;
      padding: 30px;
      display: inline-block;
      text-align: center;
      margin: 20px;
      margin-top: 10%;
      border: 2px solid black;
      border-radius: 5px;
    }
  </style>
  <head>
    <meta charset="UTF-8" />
    <title>Post Office Information</title>
    <link
      href="https://fonts.googleapis.com/css2?family=Lato:wght@400;700&display=swap"
      rel="stylesheet"
    />
  </head>
  <body>
    <div id="weatherResults">
      <table>
        <tr>
          <th>
            <h3>State of Post Office :</h3>
          </th>
          <th>
            <h3>{{ post_office }}</h3>
          </th>
        </tr>
        <tr>
          <th>
            <h3>Name of Post Office :</h3>
          </th>
          <th>
            <h3>{{ name }}</h3>
          </th>
        </tr>
      </table>
    </div>
  </body>
</html>
```

```

        </th>
    </tr>
    <tr>
        <th>
            <h3>Block of Post Office:</h3>
        </th>
        <th>
            <h3>{{ block }}</h3>
        </th>
    </tr>
    <tr>
        <th>
            <h3>District of Post Office:</h3>
        </th>
        <th>
            <h3>{{ district }}</h3>
        </th>
    </tr>
</table>
<a href="http://localhost:8080/"><h4>Back to the Home page</h4></a>
</div>
</body>
</html>

```

- 3) Go to command prompt
- 4) Open google cloud SDK shell
- 5) Type command and press enter  
`py google-cloud-sdk\bin\dev_appserver.py` (address of your folder where you have saved these two files.)
- 6) Go to Local Host:8080 and press Enter
- 7) First output screen is will appear, now enter any pincode
- 8) After that final output will displayed on the screen.



## OUTPUT:

TEST

File Explorer window showing the contents of the folder TEST (C:\Users\Sharaya\Desktop\TEST).

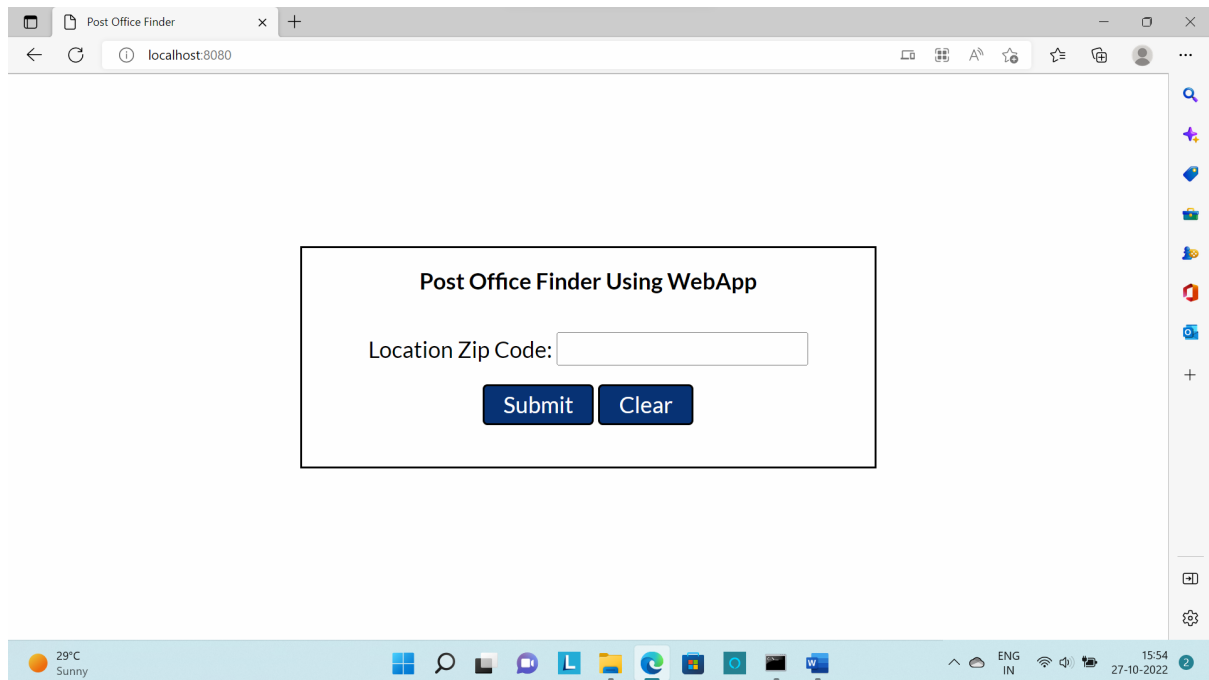
| Name    | Date modified    | Type                     | Size |
|---------|------------------|--------------------------|------|
| app     | 27-10-2022 13:25 | Yaml Source File         | 1 KB |
| index   | 27-10-2022 14:39 | Microsoft Edge HTML file | 2 KB |
| main    | 27-10-2022 14:21 | Python File              | 2 KB |
| main    | 27-10-2022 14:22 | Compiled Python File     | 3 KB |
| results | 27-10-2022 14:40 | Microsoft Edge HTML file | 2 KB |

Google Cloud SDK Shell - py google-cloud-sdk\bin\dev\_appserver.py C:\Users\Sharaya\Desktop\TEST

```

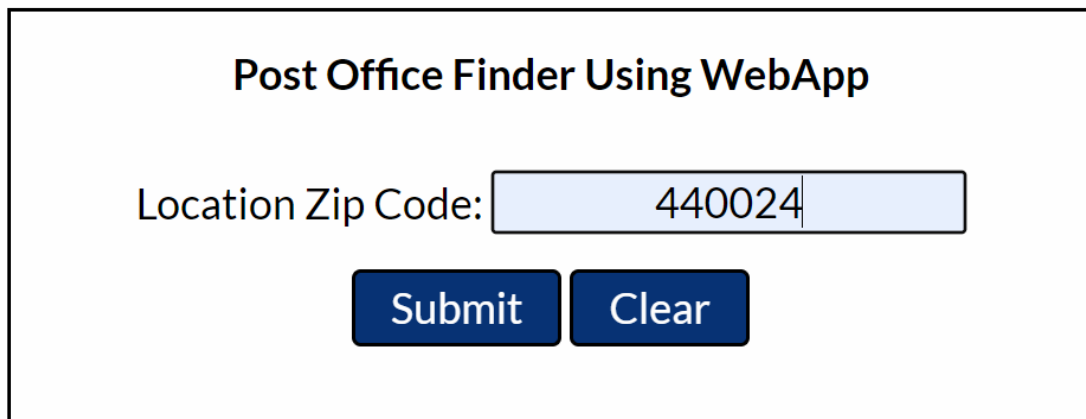
Welcome to the Google Cloud CLI! Run "gcloud -h" to get the list of available commands.
---
C:\Users\Sharaya\AppData\Local\Google\Cloud SDK>py google-cloud-sdk\bin\dev_appserver.py C:\Users\Sharaya\Desktop\TEST
INFO 2022-10-27 15:53:43,109 dev_appserver2.py:316] Skipping SDK update check.
WARNING 2022-10-27 15:53:43,762 simple_search_stub.py:1196] Could not read search indexes from c:\users\sharaya\appdata\local\temp\appengine.None\search_indexes
INFO 2022-10-27 15:53:43,765 <string>:384] Starting API server at: http://localhost:54775
INFO 2022-10-27 15:53:43,947 dispatcher.py:280] Starting module "default" running at: http://localhost:8080
INFO 2022-10-27 15:53:43,950 admin_server.py:150] Starting admin server at: http://localhost:8000
INFO 2022-10-27 15:53:45,984 instance.py:294] Instance PID: 20776
INFO 2022-10-27 15:54:27,615 module.py:890] default: "GET / HTTP/1.1" 200 1829
INFO 2022-10-27 15:54:27,713 module.py:890] default: "GET /favicon.ico HTTP/1.1" 404 -
INFO 2022-10-27 15:54:29,352 instance.py:294] Instance PID: 5172

```



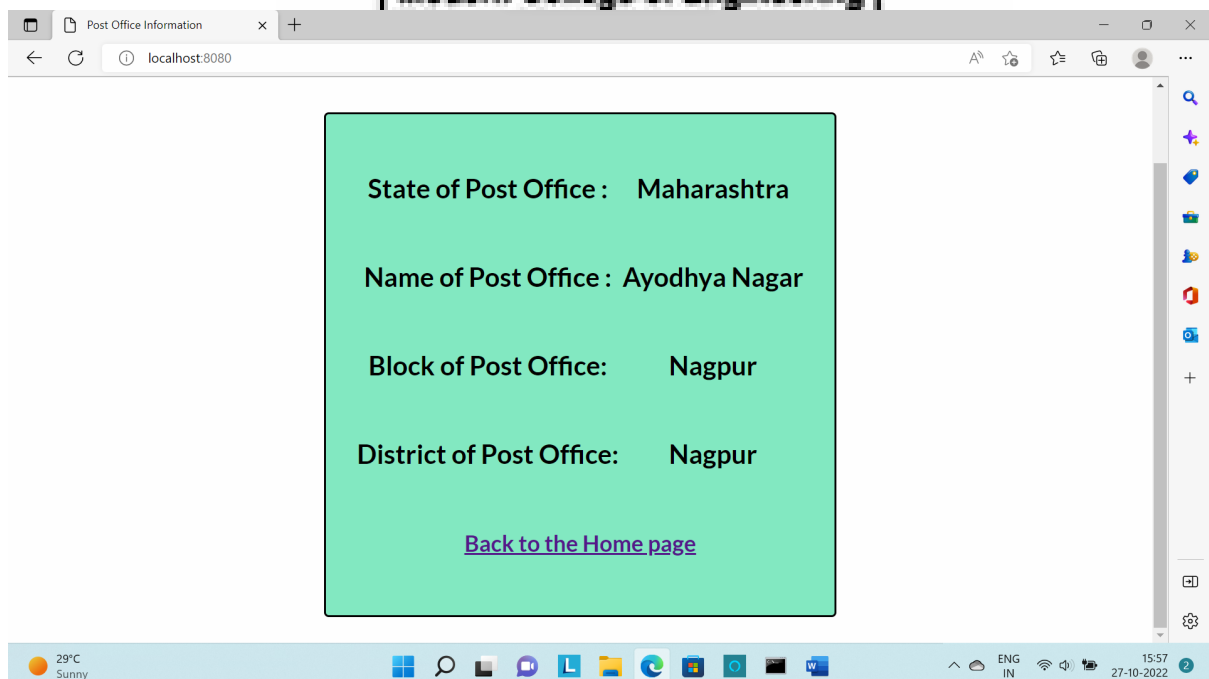
Post Office Finder Using WebApp

Location Zip Code:



Post Office Finder Using WebApp

Location Zip Code:



Post Office Information

State of Post Office : Maharashtra

Name of Post Office : Ayodhya Nagar

Block of Post Office: Nagpur

District of Post Office: Nagpur

[Back to the Home page](#)



**Conclusion:**

