Cloud Application Development

Week -4

4. GOOGLE APP ENGINE Install Google App Engine. Create hello world app and other simple web applications using python / java.

**Step 1: Set Up Google Cloud SDK**

1. **Install Google Cloud SDK**:
   * Download and install the Google Cloud SDK.
2. Initialize the SDK:

. Run the following command in your terminal or command prompt to initialize the SDK:

gcloud init

Follow the prompts to log in to your Google Cloud account and select a project.

**Step 2: Enable Google App Engine**

1. **Enable the App Engine API**:
   * Go to the App Engine page in Google Cloud Console.
   * Select your project and enable the App Engine API.
2. **Create an App Engine Application**:
   * Run the following command to create an App Engine application within your project:

gcloud app create

Choose the region where you want to deploy your application.

**Step 3: Install App Engine SDK for Python or Java**

* Install the App Engine SDK components by running:

gcloud components install app-engine-python

gcloud components install app-engine-java

**Step 4: Write a "Hello World" Application**

**Python Example**

1. **Create a new directory** for your project and navigate into it

mkdir hello-world-python

cd hello-world-python

**2.Create a main.py file** with the following code

import webapp2

class MainPage(webapp2.RequestHandler):

def get(self):

self.response.write("Hello, World!")

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

**3.Create an app.yaml file** to configure your application:

runtime: python27

api\_version: 1

threadsafe: true

handlers:

- url: /.\*

script: main.app

**Java Example**

1. **Create a new directory** for your project and navigate into it.

mkdir hello-world-java

cd hello-world-java

**2.Create a HelloWorldServlet.java file** with the following code:

import java.io.IOException;

import javax.servlet.http.\*;

public class HelloWorldServlet extends HttpServlet {

@Override

public void doGet(HttpServletRequest req, HttpServletResponse resp) throws IOException {

resp.setContentType("text/plain");

resp.getWriter().println("Hello, World!");

}

}

**3.Create an appengine-web.xml file** inside WEB-INF to configure App Engine:

<appengine-web-app xmlns="http://appengine.google.com/ns/1.0">

<application>YOUR\_PROJECT\_ID</application>

<version>1</version>

</appengine-web-app>

**4.Create a web.xml file** in WEB-INF for servlet mapping:

<web-app xmlns="http://java.sun.com/xml/ns/javaee" version="2.5">

<servlet>

<servlet-name>HelloWorld</servlet-name>

<servlet-class>HelloWorldServlet</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>HelloWorld</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

**Step 5: Deploy the Application**

1. **Deploy the app** to Google App Engine:
   * For Python:

gcloud app deploy app.yaml

. For Java

gcloud app deploy

**2.View your application**:

Run the following command to open your app in the browser

gcloud app browse.