

DEPLOY SIMPLE JAVA APPLICATION USING GOOGLE APP ENGINE

Prerequisites

- **Download Google Cloud CLI:** [Google Cloud CLI download](#) for your respective OS and run the script to install it
- **GCP credit application**
- **Make Sure Billing Information is Set Up**

Process

- **Create a project :** Navigate to [Google Cloud Console](#) and create a project

The image shows two parts of the Google Cloud Console interface. The top part is a 'Select a project' dialog box. It has a search bar labeled 'Search projects and folders' with a magnifying glass icon. Below the search bar are tabs for 'RECENT', 'STARRED', and 'ALL'. Under the 'RECENT' tab, there is a table with two columns: 'Name' and 'ID'. The table contains one entry: 'My First Project' with a checkmark, star, and help icon, and the ID 'promising-life-397316'. A 'CANCEL' button is at the bottom right. The bottom part is the 'Create project' form. It has a 'Project name' field with the text 'CS3300 Project' and a help icon. Below it, the 'Project ID' is shown as 'cs3300-project-400016' with a note that it cannot be changed later and an 'EDIT' link. There is a 'Location' field with a dropdown menu showing 'No organization' and a 'BROWSE' button. At the bottom, there are 'CREATE' and 'CANCEL' buttons.

Name	ID
✓ ☆ ? My First Project	promising-life-397316

Project name * CS3300 Project ?

Project ID: cs3300-project-400016. It cannot be changed later. [EDIT](#)

Location *
No organization [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)

- **Create a Simple Spring Boot Application:**

- Navigate to <https://start.spring.io/>
 - **Project:** Maven
 - **Packaging:** jar
 - **Java:** 8 (Recommended)
 - Add the **Spring Web** dependency and click Generate

- Create a HelloWorld Controller to test the endpoint

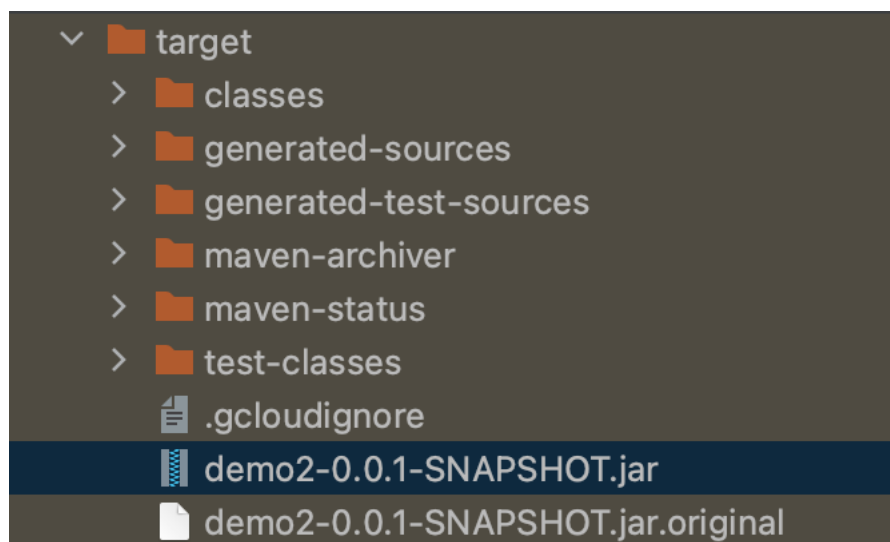
```
@RestController
class HelloWorldController {
    no usages
    @GetMapping("/hello")
    public String hello() {
        return "Hello World!";
    }
}
```

- Update the POM file to have the Google Cloud Tools Plugin

```
<plugin>
  <groupId>com.google.cloud.tools</groupId>
  <artifactId>appengine-maven-plugin</artifactId>
  <version>2.4.4</version>
  <configuration>
    <version>1</version>
    <projectId>GCLLOUD_CONFIG</projectId>
  </configuration>
</plugin>
```

- Once added make sure to rebuild the POM file

- **Package the Maven Build:** To test and get development server running, we will need maven.
 - If there is a path variable defined for maven run:
 - `mvn clean install -DskipTests` in the root directory
 - If no path variable, macOS can run
 - `./mvnw clean install -DskipTests`
 - Windows can run
 - `./mvnw.cmd clean install -DskipTests`
- This packages the maven build into a JAR file in the Target directory which we will use to deploy onto GCP



- **Deploy to GCP**
 - Run `gcloud -v` to make sure the Google Cloud CLI is installed
 - Run `gcloud init` to initialize google cloud.
 - Make sure to choose the default configuration
 - You will then be prompted to login with your email (Make sure to use the email that has billing set up with the credits provided)

- Choose the project name that you just created
 - Now make sure to CD into your target directory where the JAR file was generated
 - Run `gcloud app deploy <jarFileName>`
 - Choose the region you want to deploy onto, anything us-east is fine
 - Once successfully deployed, there will be a URL in the console to take you to where the project is deployed.
 - If not run
 - `gcloud app browse`
 - **Clean up to avoid billing charges:** Project settings=>shut down project
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