Compute Engine Demo -KirkYagami

Create VM Instance

1. Enable `Google Compute Engine API`.
2. Navigate to: Virtual Machines -> VM Instances -> Create Instance -> New VM Instance -> Provide required details
3. Fill in the following fields:
    - **Name:** rev-vm
    - **Labels:** environment: dev
    - **Region:** us-central1
    - **Zone:** us-central1-a
4. Configure the machine settings:
    - **Machine Configuration:**
        - **Series:** E2
        - **Machine Type:** e2-micro
5. Set the availability policies:
    - **VM Provisioning Model:** Standard
6. Configure additional settings:
    - **Display Device:** checked
    - **Confidential VM Service:** unchecked (leave as default)
    - **Container:** unchecked (leave as default)
    - **Boot Disk:** Leave to defaults
7. Set identity and API access:
    - **Service Account:** Compute Engine default Service Account
    - **Access Scopes:** Allow default Access
8. Configure firewall settings:
    - Allow HTTP Traffic

Connect to Linux VM Instance using SSH

1. Go to VM Instances -> rev-vm -> SSH -> Open in browser window
2. Understand what happens in background when opening SSH Connection via browser

1. SSH Keys transferred to VM

2. Verify in `.ssh/authorized_keys` file

```
# Verify `/home/<USER_NAME>/.ssh/authorized_keys`
cat /home/nikhil/.ssh/authorized_keys
```

Webserver-install.sh

- Create a simple script named `webserver-install.sh` and put the below content and run it
- webserver-install.sh

```
sudo apt install -y telnet
sudo apt install -y nginx
sudo systemctl enable nginx
sudo chmod -R 755 /var/www/html
HOSTNAME=$(hostname)
sudo echo "<!DOCTYPE html> <html> <body> <h1> Welcome to Data an Analytics
Course</h1> <p><strong>VM Hostname:</strong> $HOSTNAME</p> <p><strong>VM IP
Address:</strong> $(hostname -I)</p>
<p> Made with ❤ !!! </p>
<p>Google Cloud Platform - Demo 1</p>
<h3> Made with ❤ !!! </h3>
</body></html>" | sudo tee /var/www/html/index.html
```

```
sudo apt install -y telnet
sudo apt install -y nginx
sudo systemctl enable nginx
sudo chmod -R 755 /var/www/html
HOSTNAME=$(hostname)
sudo echo "<!DOCTYPE html>
<html>
<head>
    <title>Revature</title>
    <style>
        body {
            background-color: #1c1c1c;
            color: #ffffff;
            font-family: Arial, sans-serif;
            text-align: center;
            padding: 50px;
        }
```

```
        h1 {
            color: #e0e0e0;
        }
        p {
            font-size: 18px;
            margin: 10px 0;
        }
        .heart {
            color: #ff4081;
        }
    </style>
</head>
<body>
    <h1>Welcome to Revature!</h1>
    <p><strong>VM Hostname:</strong> $HOSTNAME</p>
    <p><strong>VM IP Address:</strong> $(hostname -I)</p>
    <p>Google Cloud Platform - Demo 1</p>
    <h3>Made with <span class='heart'>&#10084;</span> !!!</h3>
</body>
</html>" | sudo tee /var/www/html/index.html
```

Upload and Run the webserver install script

```
# Run the commands
hostname
ip -s addr
Observation:
1. make a note of IP address and hostname

# Upload file
Upload file webserver-install.sh

# Give Permissions
chmod 755 webserver-install.sh

# Install Webserver using script
./webserver-install.sh

# Verify Files
cd /var/www/html
ls
```

```
cd app1
ls
```

Access Webserver Pages

```
# Access Webserver Pages

http://<external-ip-of-vm>
```