Please complete the following assignment.

Develop a repeatable process using tools or languages of your choice to deploy a micro application in the cloud.

**This should include:**

- 3 cloud instances (please use lowest cost instance type) in GCP (preferred), AWS or Azure.

- Be running a Linux based OS of your choosing

- 3 network subnets (bastion, frontend, backend)

The 3 instances will be frontend, backend and bastion/jump host.

**The bastion/jump host instance will:**

Sit in the bastion subnet.

Allow ssh from the Internet but only from specific network addresses (allow-list) and only a list of allowed user names.

Allow ssh connections to the web and application instances on their private IPs only.

**The web and application instances should have:**

httpd installed.

curl installed.

Allow ssh connections in from jump host/bastion.

**Web instance will:**

Sit in the web subnet.

Be accessible on port 443 only from the Internet (note that default SSL certs are ok). (Using a proxy or dual homed machine?)

Can connect to app tier on port 80 (using curl).

**App instance will:**

Sit in the app subnet.

Allow connections from web tier on port 80 only.

Not be able to connect to web VM in port 443.

No outbound connections out to the Internet should be allowed from any of the instances.

**Other notes:**

Include a README with instructions on how to run the code and any dependencies.

**Follow up questions:**

How would you make this deployment fault tolerant and highly available?

How would you make this deployment more secure?

How would you make this deployment cloud agnostic?

**Please send a link to a repo (including access credentials if necessary) to the code.**

If you need an GCP account to test in, I can provide that. You are free to use your own personal account too but I cannot provide a AWS or Azure account. Please also let me know if you have any questions.