Elastic Load Balancer

Project 1: Internet-facing Load Balancer with Public Subnet

`Build a Highly available Website using the instructions below from today's class`

NB: please read carefully the instructions and if needed refer to the video recording
find user data script at the bottom

Step 1: Create ALB and Webserver Security Group -----> "alb_sg" and "web_sg"
alb_sg should allow 0.0.0.0/0 on port 80
web_sg should allow alb_sg on port 80
take screenshot showing inbound rule of web_sg

NB: please make sure you TAG your resources and note the alb_sg id

Step 2: Create your Public webservers Image -----> tag: image_server_1 and tag: image_server_2
test using public ip address
take screenshot showing timeout of both in the browser

Step 3: Create Target Group with targets (Webservers) -----> name: "may2022class-tg"
please observe the status
take screenshot showing "Health status details"

Step 4: Create an Application Load Balancer (ALB) -----> name: "may2022class-alb"
listener on http (80) only
select may2022class-alb > click on Listener and take a screenshot

Step 5: Observe the target group status again in the console
take a screenshot when it shows healthy

Step 6: test your website in a browser using the ALB dns name and refresh multiple time
take screenshots of both Blue and Red

Step 7: stop webserver 1 and test again to see which server is now responding
take a screenshot

Step 8: clean up your environment by deleting in the reverse order that you created all resources
take screenshots of both Blue and Red

Step 9: clean up your environment by deleting in the reverse order that you created all resources

USER DATA SCRIPT
SERVER 1

```
#!/bin/bash
yum update -y
yum install httpd -y
echo '<html><body><h1 style="color:Blue;">Welcome to the Image Server 1 (Blue)</h1></body></html>' > /var/www/html/index.html
sudo systemctl start httpd
sudo systemctl enable httpd
```

SERVER 2

```
#!/bin/bash
yum update -y
yum install httpd -y
echo '<html><body><h1 style="color:Red;">Welcome to the Image Server 2 (Red)</h1></body></html>' > /var/www/html/index.html
systemctl start httpd
systemctl enable httpd
```

Project 2: Internet-facing Load Balancer with Private Subnet

Repeat All step in **Homework 1** except step 2, create your EC2 Instance in the Private Subnet

NB: read step 2 in Homework 1 carefully

use any resource to make this to work