

Assignment 2 report

Name: Vu Duc Tran

Student ID: 104175614

Tutorial class: Tuesday 10:30 PM

Link to *album.php* website: <http://vtranelb-731854279.us-east-1.elb.amazonaws.com/photoalbum/album.php>

A. VPC and related functionalities.

1) VPC

I created VPC , subnets, route tables and internet gateway following the given architecture diagram
A private and a public subnet with suitable CIDR ranges in two different availability zones.

Figure 1 illustrates VTranVPC in detail.

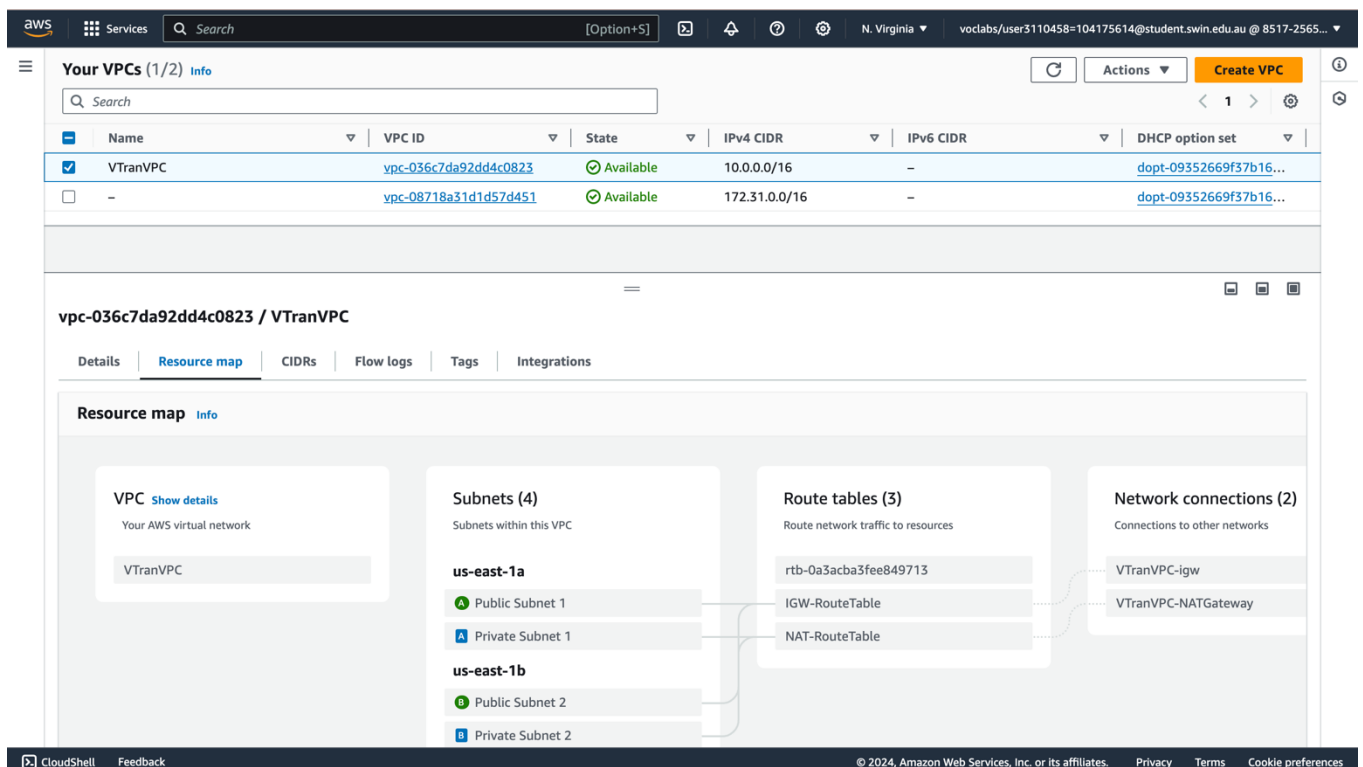


FIGURE 1

2) Security group:

Four security groups are created (NATServerSG is redundant) , all follows the least-privilege principle, each associates with required tier in the architecture diagram

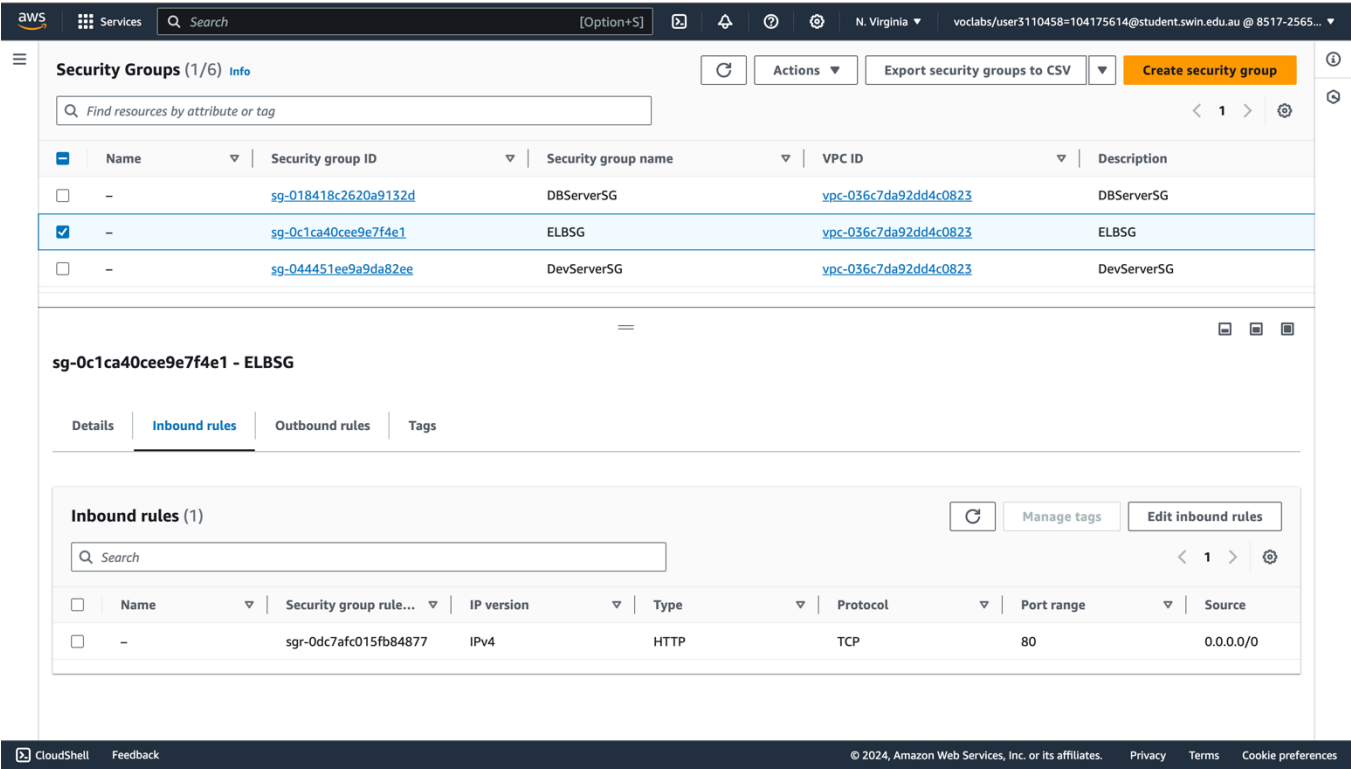


FIGURE 2

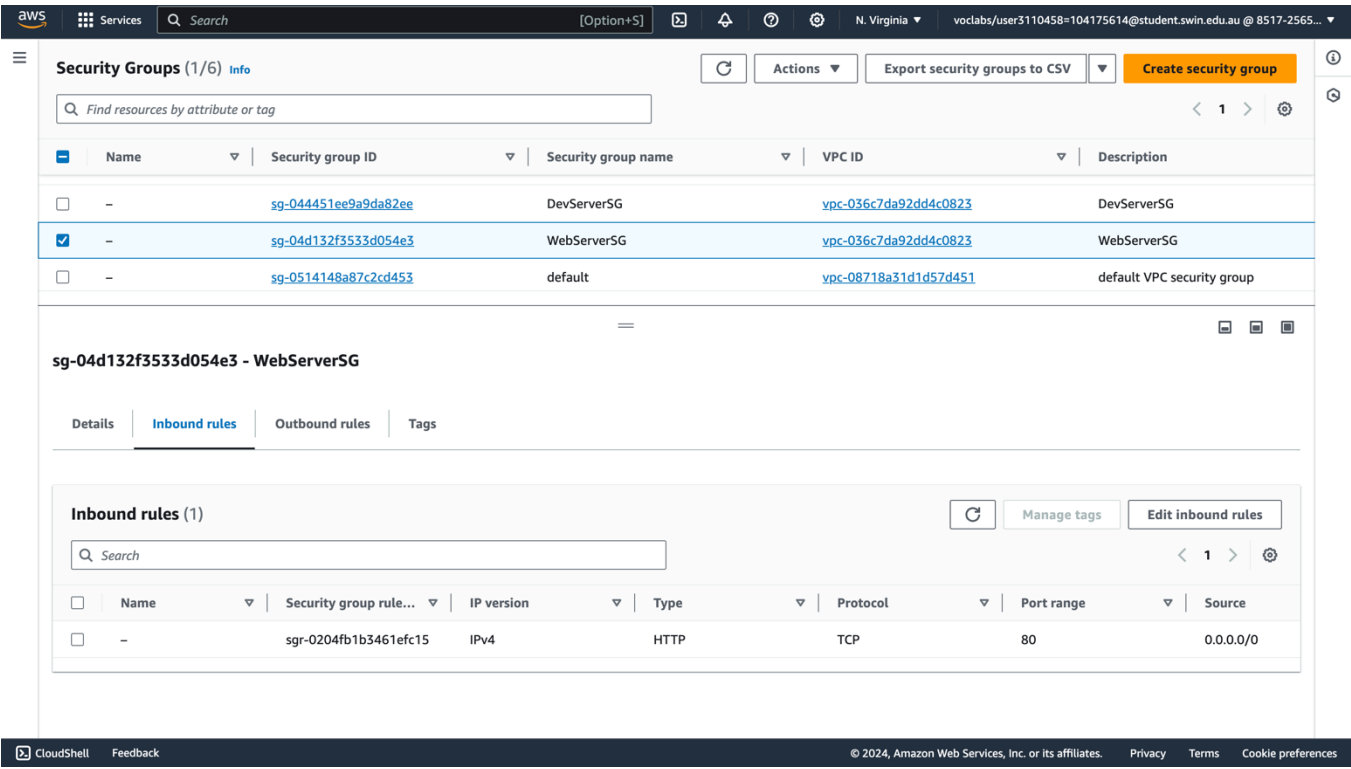


FIGURE 3

Security Groups (1/6) Info

Find resources by attribute or tag

	Name	Security group ID	Security group name	VPC ID	Description
<input checked="" type="checkbox"/>	-	sg-018418c2620a9132d	DBServerSG	vpc-036c7da92dd4c0823	DBServerSG
<input type="checkbox"/>	-	sg-0c1ca40cee9e7f4e1	ELBSG	vpc-036c7da92dd4c0823	ELBSG
<input type="checkbox"/>	-	sg-044451ee9a9da82ee	DevServerSG	vpc-036c7da92dd4c0823	DevServerSG

sg-018418c2620a9132d - DBServerSG

Details | **Inbound rules** | Outbound rules | Tags

Inbound rules (2)

Search

	Name	Security group rule...	IP version	Type	Protocol	Port range	Source
<input type="checkbox"/>	-	sgr-04ead47b109b5d...	-	MYSQL/Aurora	TCP	3306	sg-044451ee9a9da82ee
<input type="checkbox"/>	-	sgr-0f7f56294694c674b	-	MYSQL/Aurora	TCP	3306	sg-04d132f3533

FIGURE 4

Security Groups (1/6) Info

Find resources by attribute or tag

	Name	Security group ID	Security group name	VPC ID	Description
<input type="checkbox"/>	-	sg-018418c2620a9132d	DBServerSG	vpc-036c7da92dd4c0823	DBServerSG
<input type="checkbox"/>	-	sg-0c1ca40cee9e7f4e1	ELBSG	vpc-036c7da92dd4c0823	ELBSG
<input checked="" type="checkbox"/>	-	sg-044451ee9a9da82ee	DevServerSG	vpc-036c7da92dd4c0823	DevServerSG

sg-044451ee9a9da82ee - DevServerSG

Details | **Inbound rules** | Outbound rules | Tags

Inbound rules (1)

Search

	Name	Security group rule...	IP version	Type	Protocol	Port range	Source
<input type="checkbox"/>	-	sgr-0b0265a34d3867c...	IPv4	All traffic	All	All	0.0.0.0/0

FIGURE 5

3) Network ACL

The rules needed have been added to access Web Server from public (protocol, type, source)

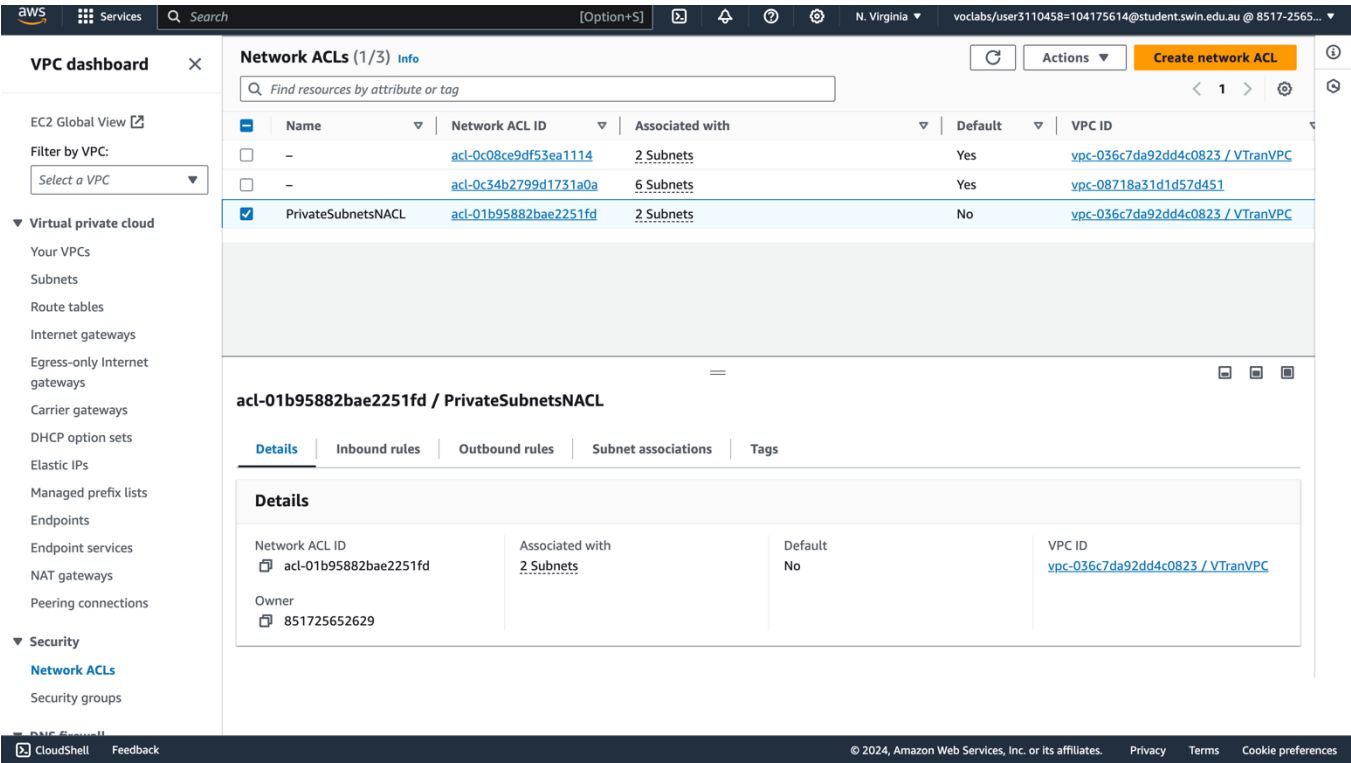


FIGURE 8

B. Create component for a highly available network:

1) DevServer launch template

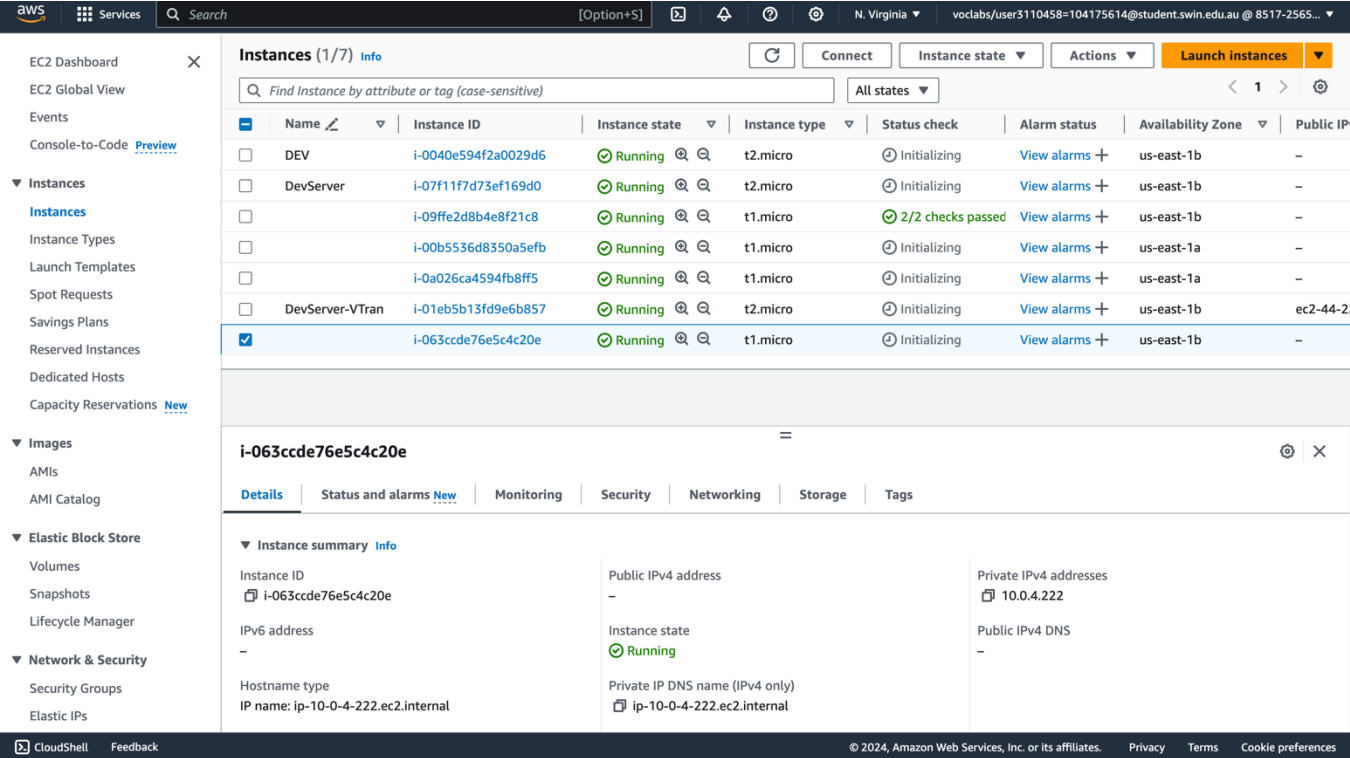


FIGURE 9

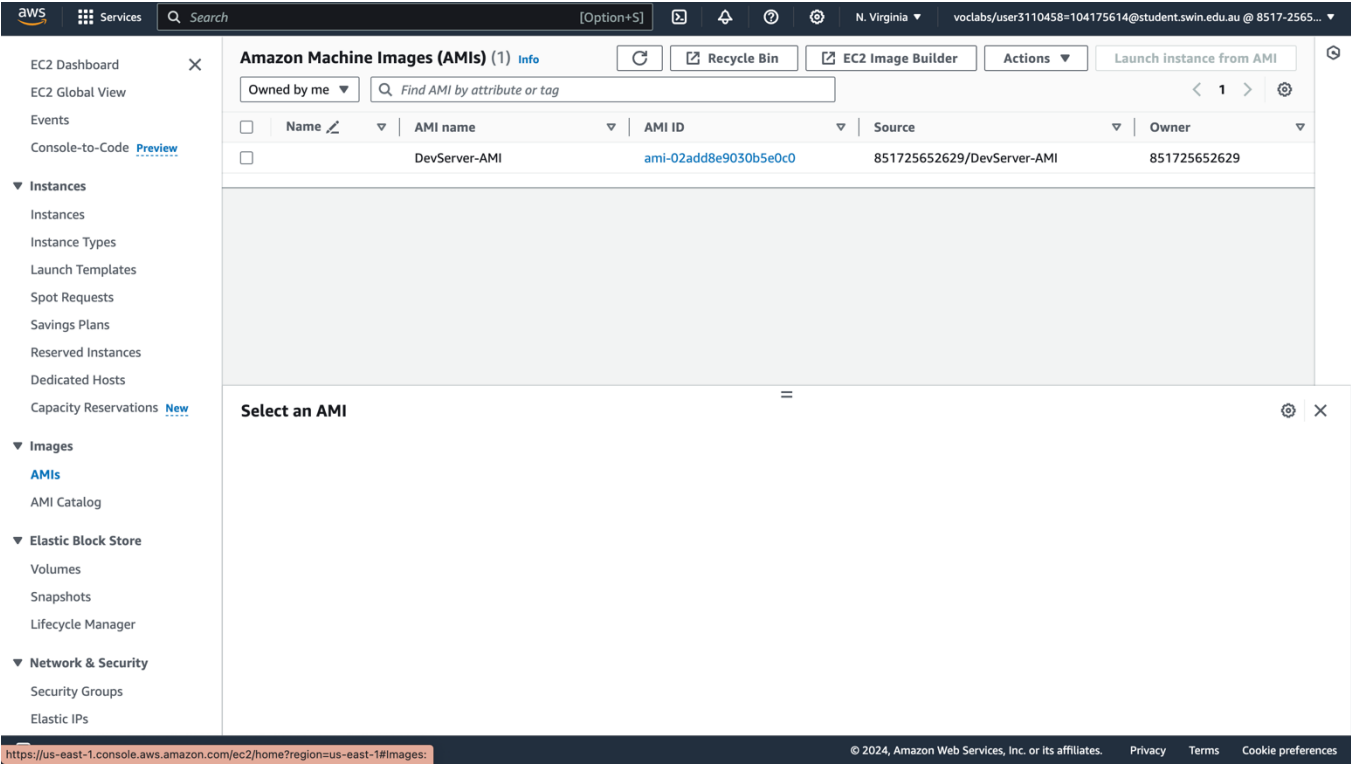


FIGURE 10

2) Create Auto Scaling Group

Config the auto scaling group in the “Target group” tab

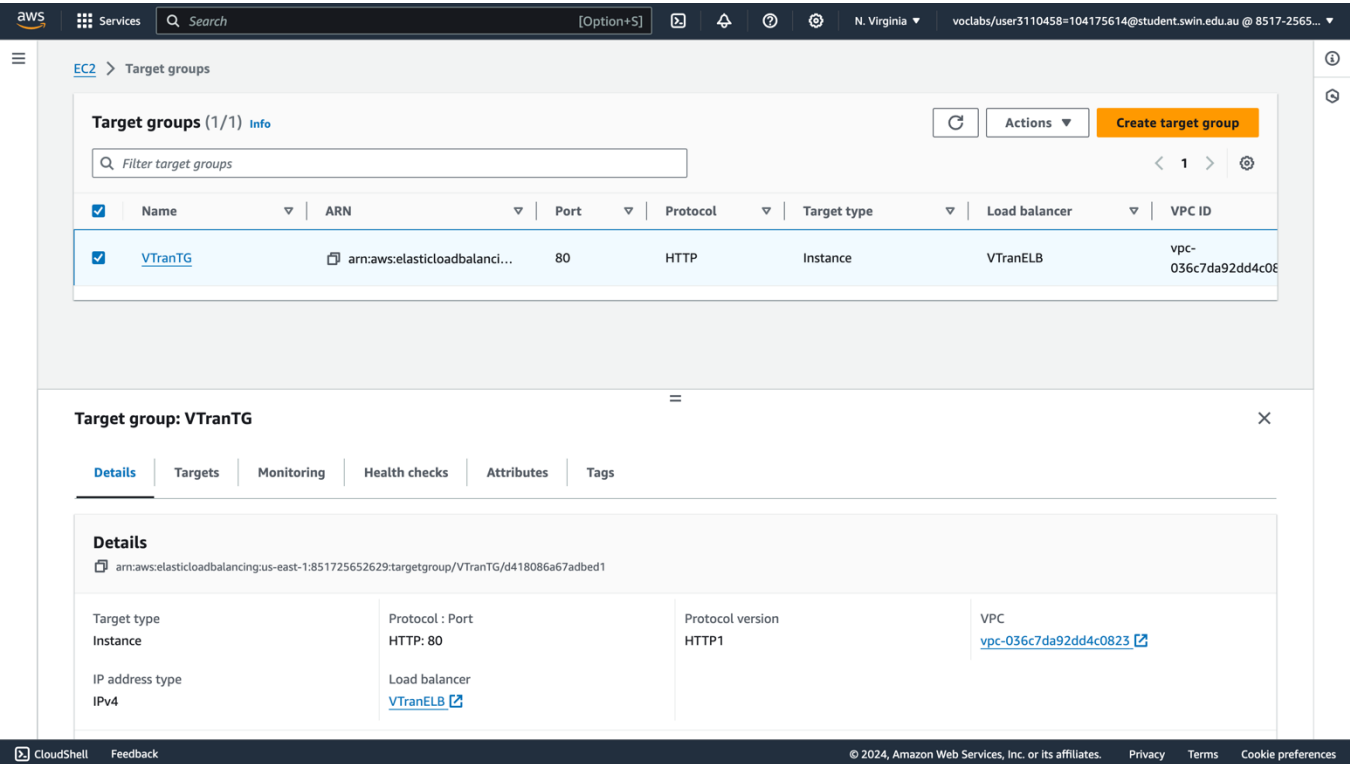


FIGURE 11

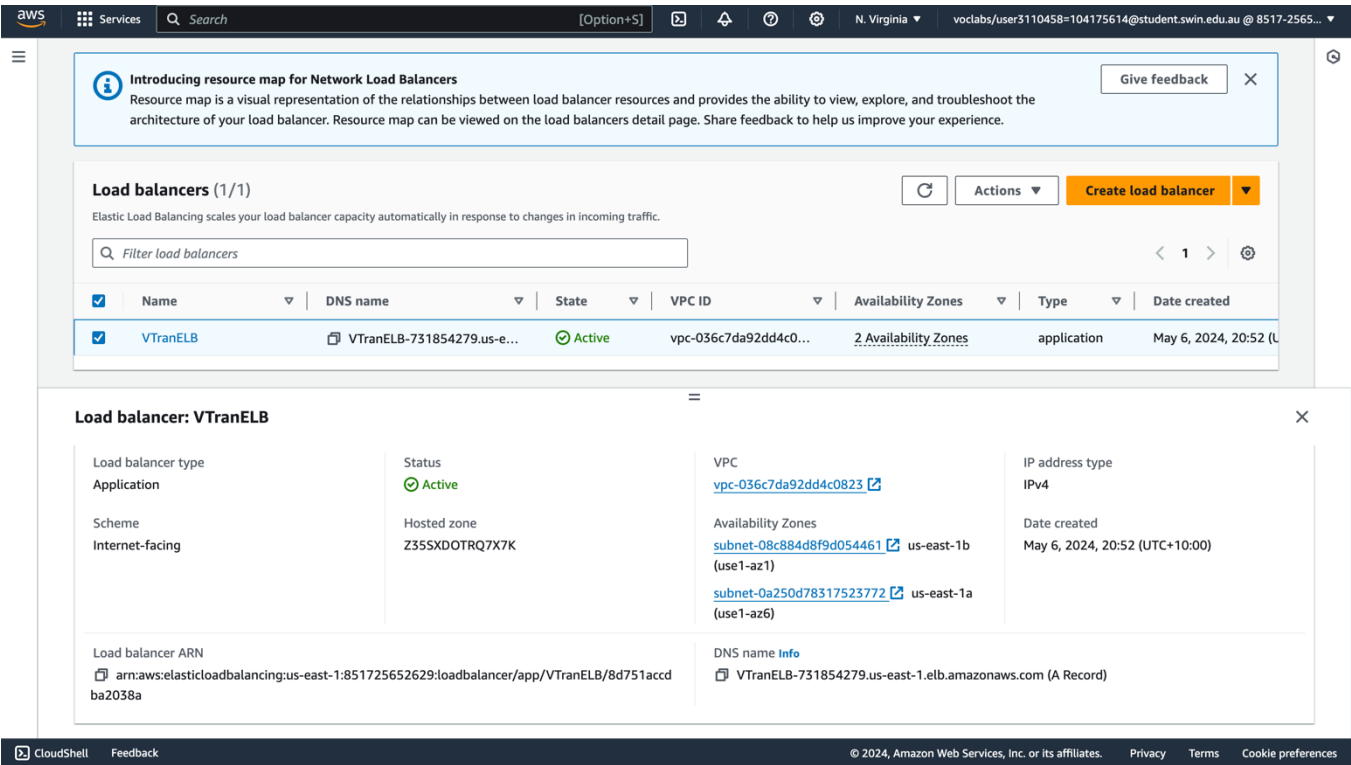


FIGURE 12

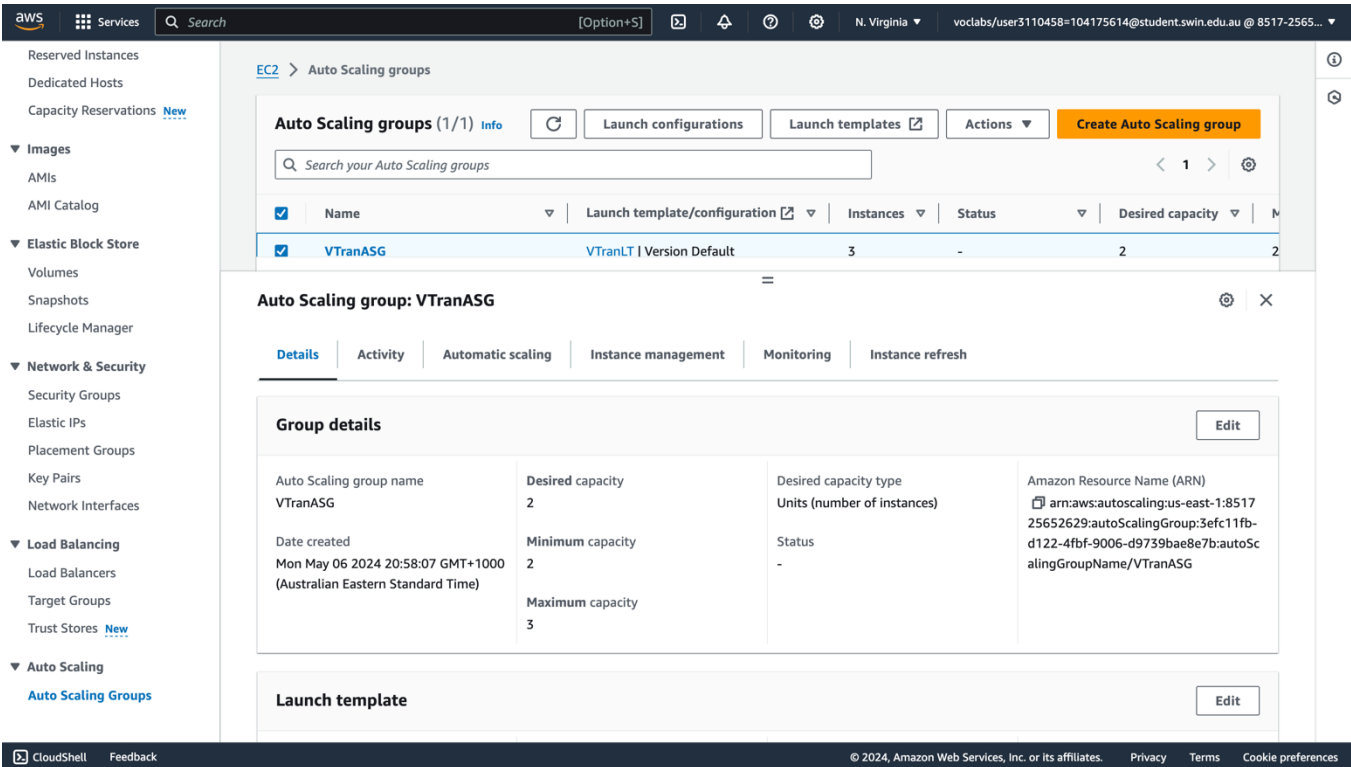


FIGURE 13

C. S3 bucket and Lambda function:
1. Creating S3 bucket

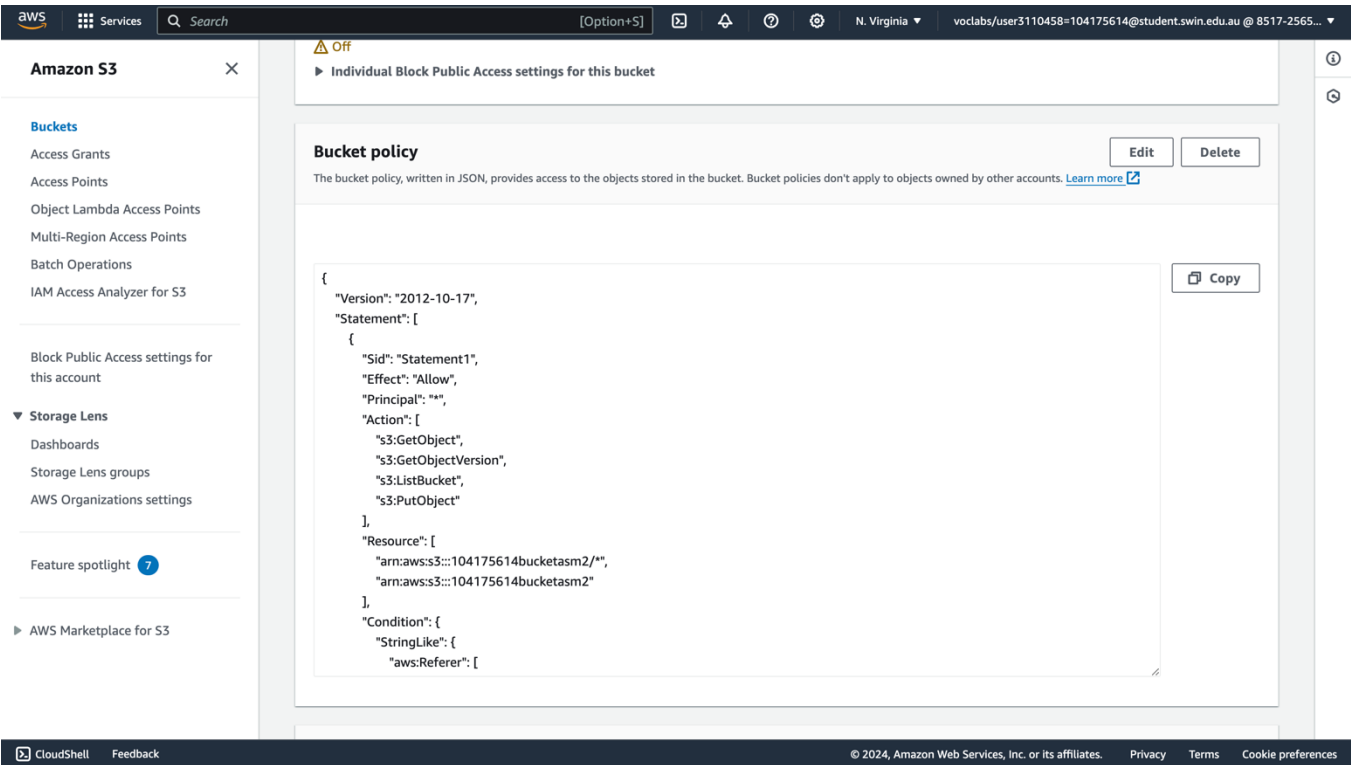


FIGURE 14

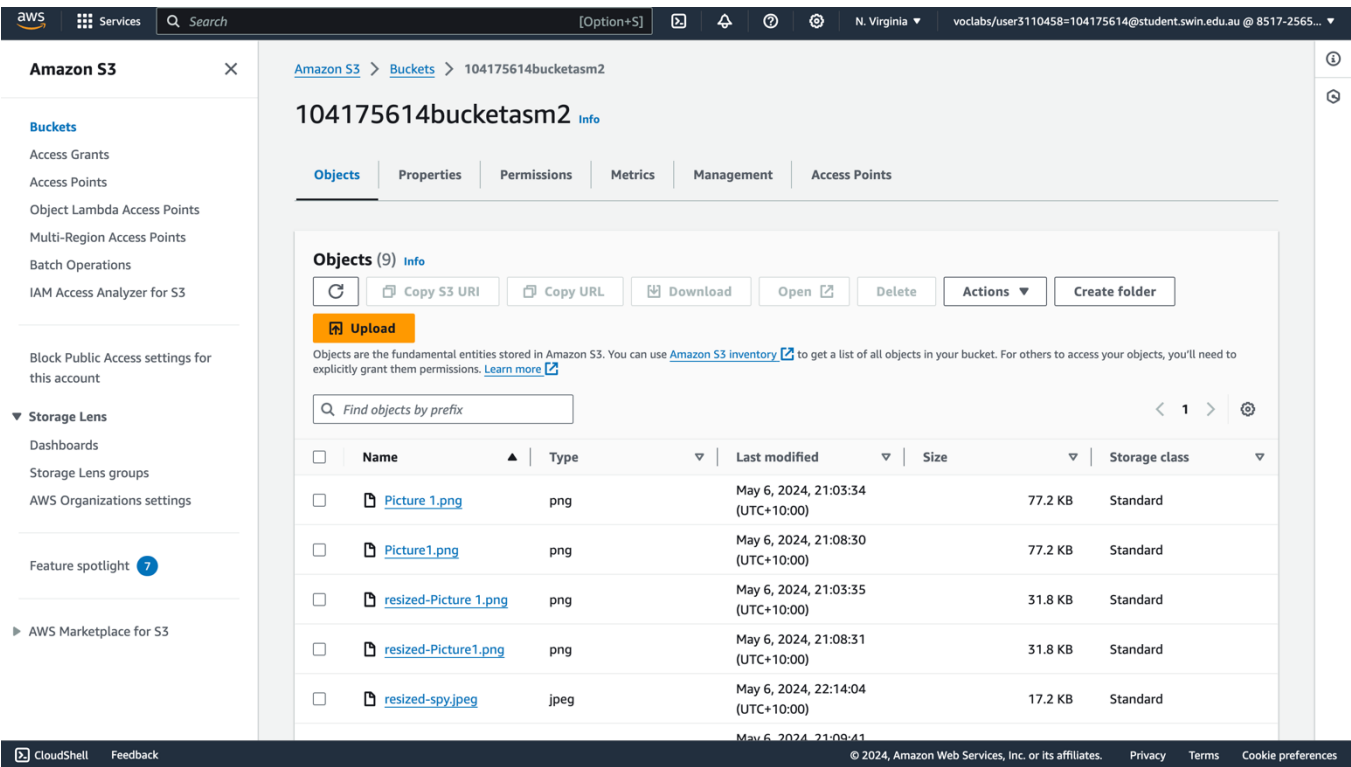


FIGURE 15

2. Creating Lambda function

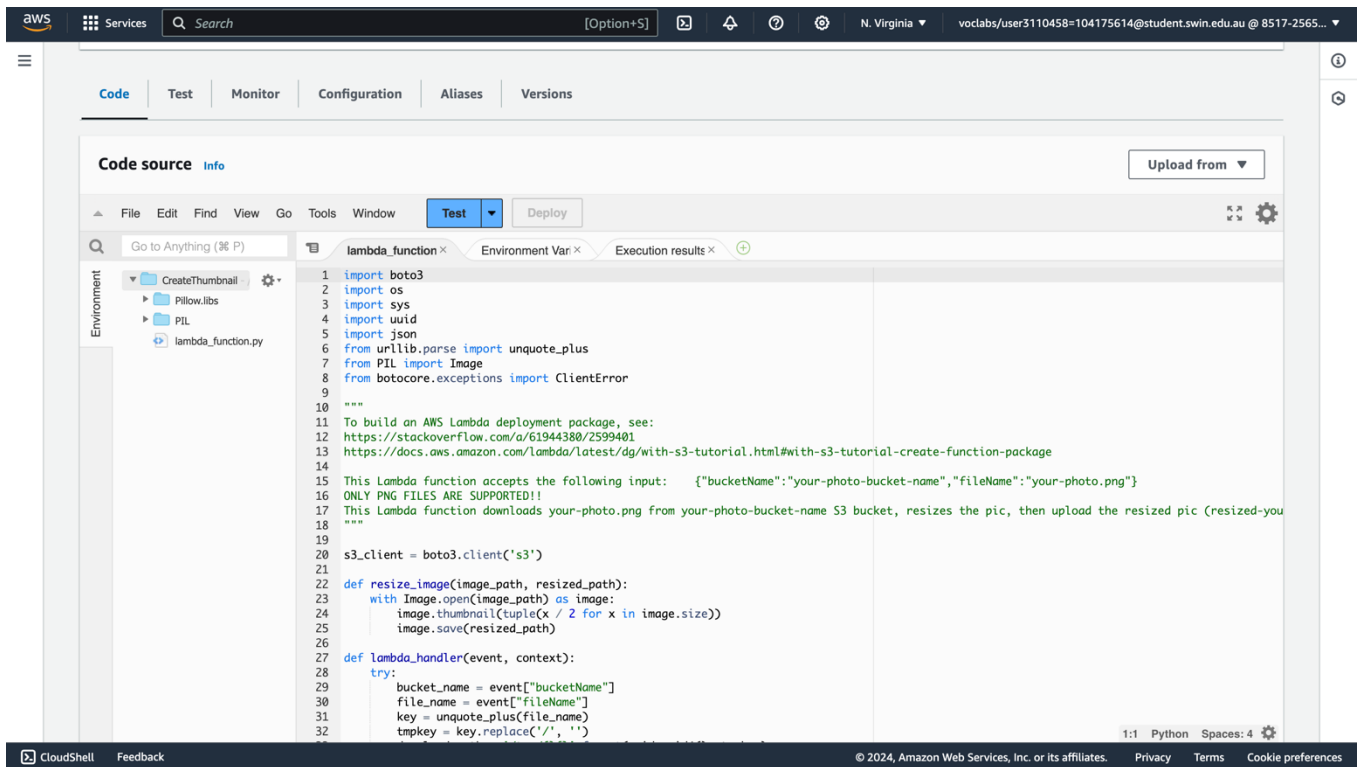


FIGURE 16

D. Website

Website can be constantly accessed through the link: <http://vtranelb-731854279.us-east-1.elb.amazonaws.com/photoalbum/album.php>

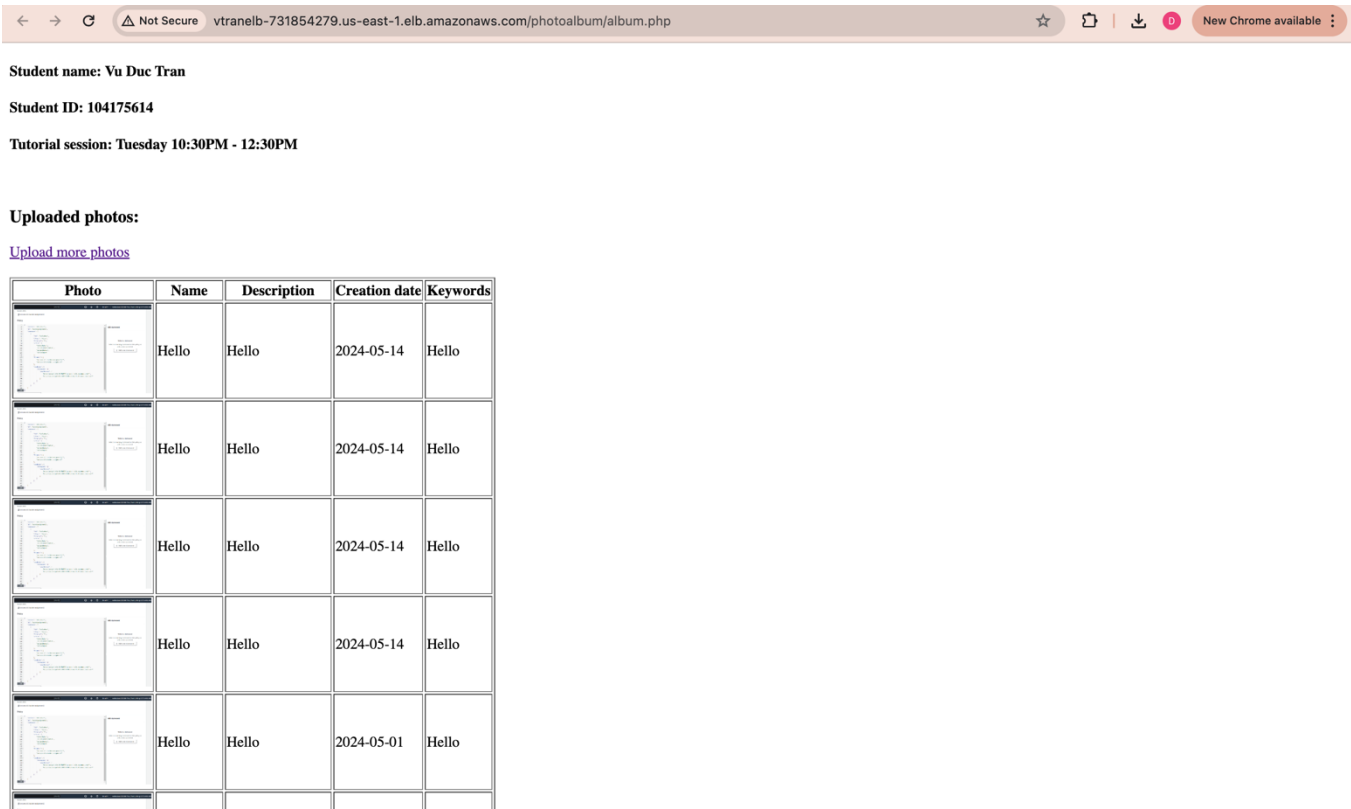


FIGURE 17

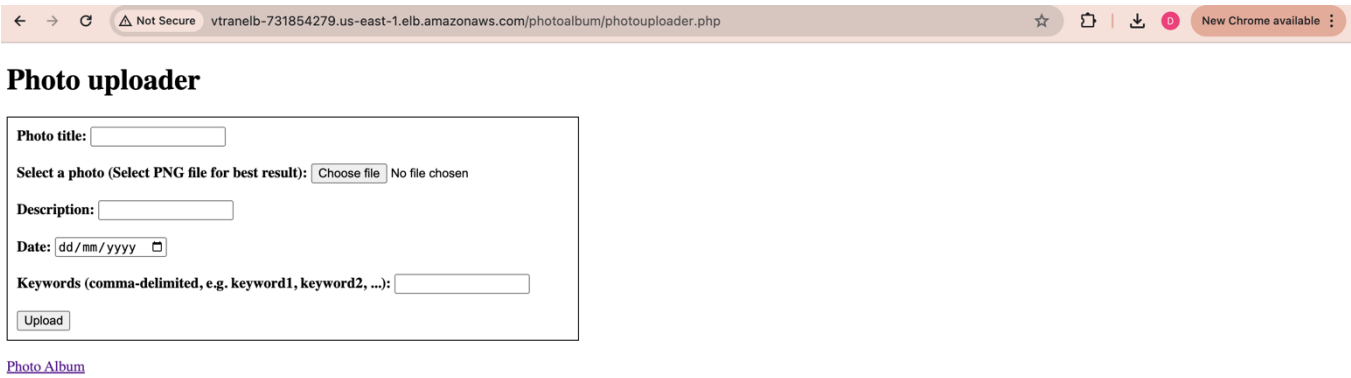


FIGURE 18