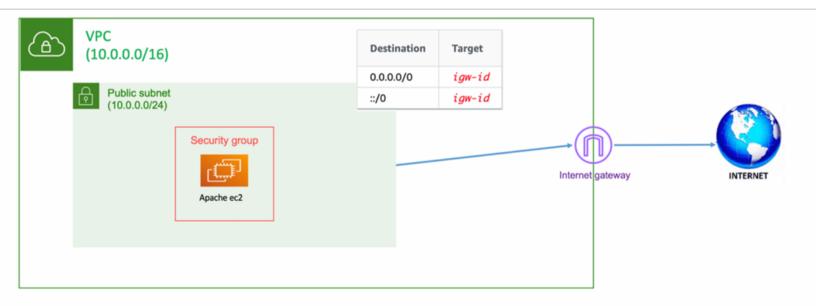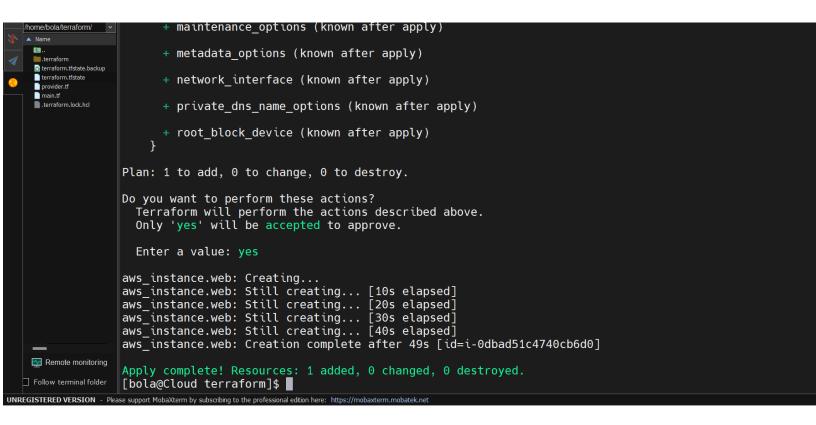Name: Bola Wissa

Task 1

Eng: Aya Nabil
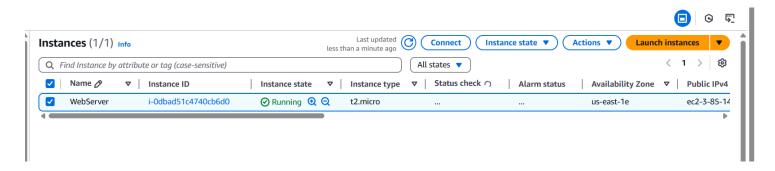
```
task.tf > ...
  1
  2    # Create VPC
  3    resource "aws_vpc" "main" {
  4      cidr_block = "10.0.0.0/16"
  5      enable_dns_support = true
  6      enable_dns_hostnames = true
  7
  8      tags = {
  9        Name = "Terraform-VPC"
 10      }
 11    }
 12
 13    # Create Public Subnet
 14    resource "aws_subnet" "public" {
 15      vpc_id                  = aws_vpc.main.id
 16      cidr_block              = "10.0.0.0/24"
 17      map_public_ip_on_launch = true
 18
 19      tags = {
 20        Name = "Public-Subnet"
 21      }
 22    }
 23
 24    # Create Internet Gateway
 25    resource "aws_internet_gateway" "gw" {
 26      vpc_id = aws_vpc.main.id
 27
 28      tags = {
 29        Name = "Internet-Gateway"
 30      }
```

```
 31    }
 32
 33    # Create Route Table
 34    resource "aws_route_table" "public" {
 35      vpc_id = aws_vpc.main.id
 36
 37      route {
 38        cidr_block = "0.0.0.0/0"
 39        gateway_id = aws_internet_gateway.gw.id
 40      }
 41
 42      route {
 43        ipv6_cidr_block = "::/0"
 44        gateway_id      = aws_internet_gateway.gw.id
 45      }
 46
 47      tags = {
 48        Name = "Public-Route-Table"
 49      }
 50    }
 51
 52    # Associate Route Table with Public Subnet
 53    resource "aws_route_table_association" "public" {
 54      subnet_id      = aws_subnet.public.id
 55      route_table_id = aws_route_table.public.id
 56    }
 57
 58    # Create Security Group
 59    resource "aws_security_group" "web_sg" {
```
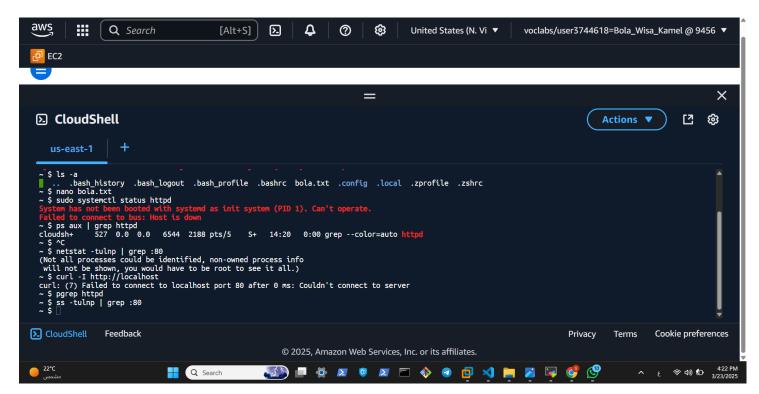
```terraform
58  # Create Security Group
59  resource "aws_security_group" "web_sg" {
60    vpc_id = aws_vpc.main.id
61
62    ingress {
63      from_port   = 80
64      to_port     = 80
65      protocol    = "tcp"
66      cidr_blocks = ["0.0.0.0/0"]
67    }
68
69    ingress {
70      from_port   = 443
71      to_port     = 443
72      protocol    = "tcp"
73      cidr_blocks = ["0.0.0.0/0"]
74    }
75
76    ingress {
77      from_port   = 22
78      to_port     = 22
79      protocol    = "tcp"
80      cidr_blocks = ["0.0.0.0/0"]
81    }
82
83    egress {
84      from_port   = 0
85      to_port     = 0
86      protocol    = "-1"
```

---

task.tf > ...

```terraform
59  resource "aws_security_group" "web_sg" {
83    egress {
84      from_port   = 0
85      to_port     = 0
86      protocol    = "-1"
87      cidr_blocks = ["0.0.0.0/0"]
88    }
89
90    tags = {
91      Name = "Web-SG"
92    }
93  }
94
95  # Create EC2 Instance with Apache Web Server
96  resource "aws_instance" "web" {
97    ami           = "ami-01f5a0b78d6089704"
98    instance_type = "t2.micro"
99    subnet_id     = aws_subnet.public.id
100
101    vpc_security_group_ids = [aws_security_group.web_sg.id]
102
103    user_data = <<-EOF
104                #!/bin/bash
105                sudo yum update -y
106                sudo yum install -y httpd
107                sudo systemctl start httpd
108                sudo systemctl enable httpd
109                echo "Welcome Bola 2025 TerraForm" | sudo tee /var/www/html/index.html
110                EOF
111
```

Welcome Bola 2025 TerraForm

Instances (1/1) Info

Last updated less than a minute ago ⟳ | Connect | Instance state ▼ | Actions ▼ | **Launch instances** ▼

🔍 Find Instance by attribute or tag (case-sensitive)

All states ▼

◀ 1 ▶ ⚙

☑	Name 🖉	▼	Instance ID	Instance state	▼	Instance type	▼	Status check ↻	Alarm status	Availability Zone	▼	Public IPv4
☑	WebServer		i-0dbad51c4740cb6d0	⊘ Running ⊕ ⊖		t2.micro		...	...	us-east-1e		ec2-3-85-14

---

aws ⊞ 🔍 Search [Alt+S] | ⟩_ | 🔔 | ❓ | ⚙ | United States (N. Vi ▼) | voclabs/user3744618=Bola_Wisa_Kamel @ 9456 ▼

🗗 EC2

═

=   ✕

⟩_ **CloudShell**   Actions ▼ | ↗ | ⚙

us-east-1 +

```
~ $ ls -a
  ..  .bash_history  .bash_logout  .bash_profile  .bashrc  bola.txt  .config  .local  .zprofile  .zshrc
~ $ nano bola.txt
~ $ sudo systemctl status httpd
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
~ $ ps aux | grep httpd
cloudsh+    527  0.0  0.0   6544  2188 pts/5    S+   14:20   0:00 grep --color=auto httpd
~ $ ^C
~ $ netstat -tulnp | grep :80
(Not all processes could be identified, non-owned process info
 will not be shown, you would have to be root to see it all.)
~ $ curl -I http://localhost
curl: (7) Failed to connect to localhost port 80 after 0 ms: Couldn't connect to server
~ $ pgrep httpd
~ $ ss -tulnp | grep :80
~ $
```

⟩_ CloudShell   Feedback   Privacy | Terms | Cookie preferences

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مشمس   ⊞ 🔍 Search   4:22 PM 3/23/2025

▼ Inbound rules

🔍 Filter rules

Name	Security group rule ID	Port range	Protocol	Source
–	sgr-0d573f78c70a9025f	22	TCP	0.0.0.0/0
–	sgr-0dc98b5fb2826e36e	443	TCP	0.0.0.0/0
–	sgr-0bd67c12130687c52	80	TCP	0.0.0.0/0

▼ Outbound rules