Name :- Anjali Punsi
Class :- D20B
Roll no :- 57
Experiment no :- 6

Aim:-

To study and Implement Platform as a Service using AWS Elastic Beanstalk Service.(Creating Sample Application)

Theory : -
What is Platform as a Service (PaaS)?

Platform as a Service (PaaS) is a cloud computing model that provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app. PaaS provides a complete environment for developing, testing, and deploying applications, including tools for application design, development, testing, and deployment, as well as hosting, maintenance, and management of the underlying infrastructure.

AWS Elastic Beanstalk Overview

AWS Elastic Beanstalk is a Platform as a Service (PaaS) offering from Amazon Web Services (AWS) that makes it easy to deploy, manage, and scale web applications and services. With Elastic Beanstalk, you can quickly deploy your application without having to worry about the underlying infrastructure. Elastic Beanstalk automatically handles the details of capacity provisioning, load balancing, scaling, and monitoring, allowing you to focus on your application code.

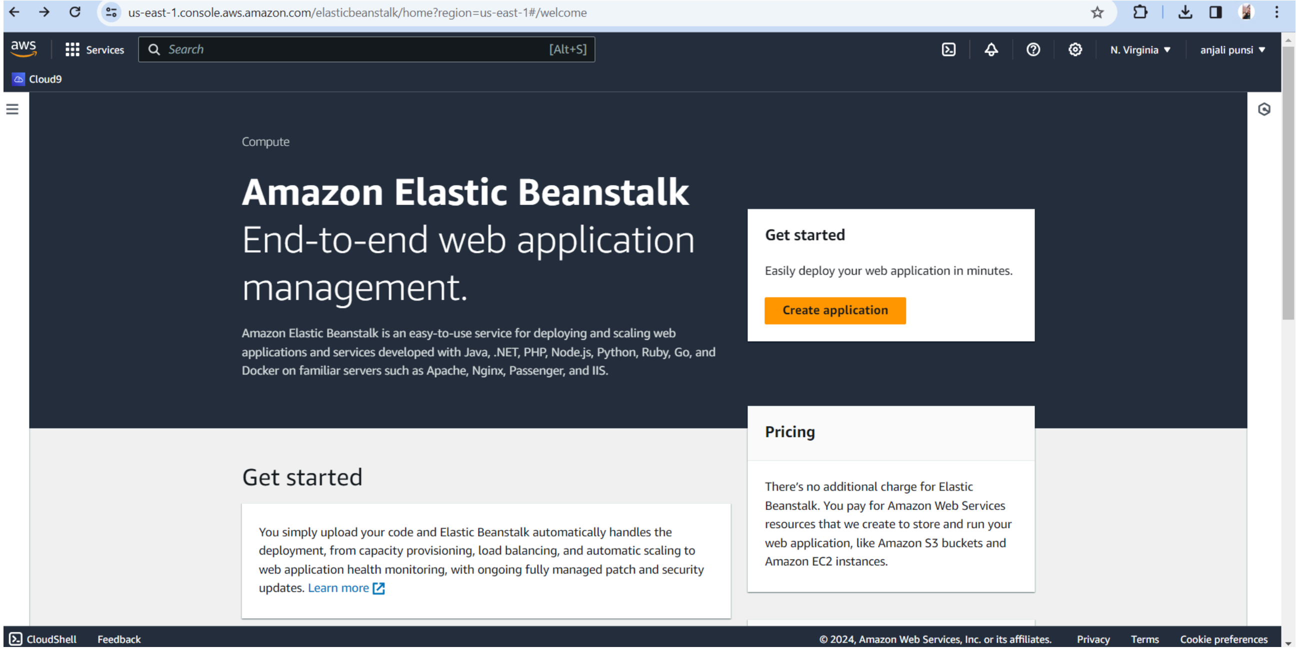
Key Features of AWS Elastic Beanstalk:

- ❖ Easy Application Deployment: Elastic Beanstalk makes it easy to deploy applications written in Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.
- ❖ Automatic Scaling: Elastic Beanstalk automatically scales your application up or down based on demand, ensuring that you have the right amount of resources at all times.
- ❖ Built-in Monitoring: Elastic Beanstalk provides built-in monitoring and logging capabilities, allowing you to monitor the health of your application and troubleshoot issues easily.

- ❖ Integrated Development Environment (IDE) Integration: Elastic Beanstalk integrates with popular IDEs such as Eclipse, Visual Studio, and AWS Toolkit for JetBrains, making it easy to deploy your applications directly from your development environment.

Steps :-

Step1 : Login to AWS console and go to Elastic Beanstalk and Click on Create Application



us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/welcome
aws
Services
Search
[Alt+S]
N. Virginia
anjali punsi
Cloud9
Compute

Amazon Elastic Beanstalk

End-to-end web application management.

Amazon Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.

Get started

Easily deploy your web application in minutes.

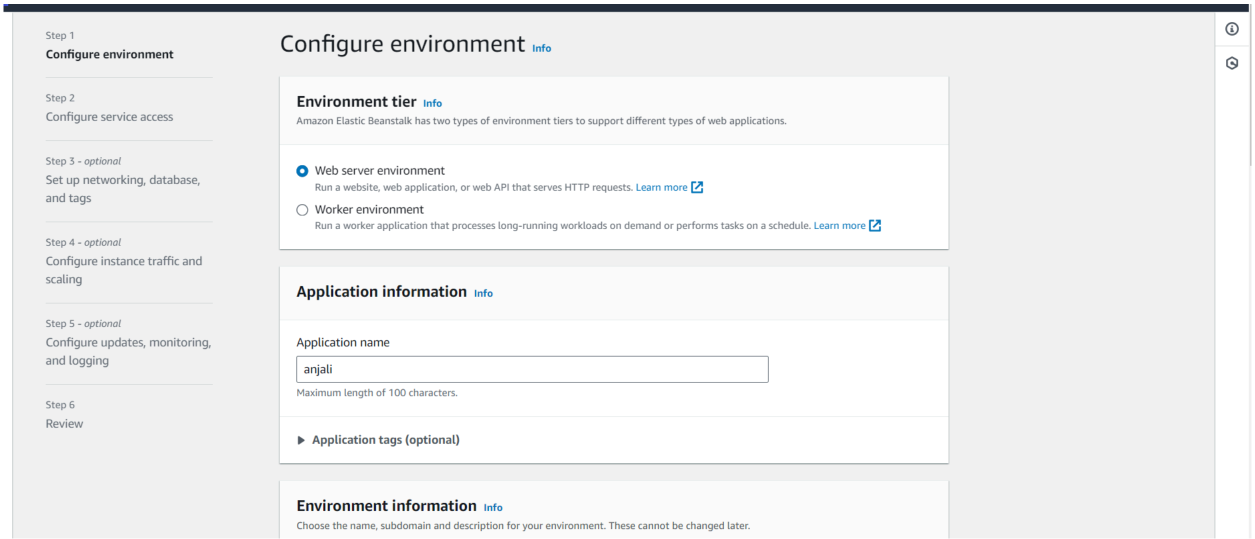
Pricing

There's no additional charge for Elastic Beanstalk. You pay for Amazon Web Services resources that we create to store and run your web application, like Amazon S3 buckets and Amazon EC2 instances.

Get started

You simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, and automatic scaling to web application health monitoring, with ongoing fully managed patch and security updates. Learn more

Step 2: Write Application information : Name, Tag,Platform etc.



Configure environment Info

Environment tier Info

Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.

● Web server environment
Run a website, web application, or web API that serves HTTP requests. Learn more

○ Worker environment
Run a worker application that processes long-running workloads on demand or performs tasks on a schedule. Learn more

Application information Info

Application name: anjali

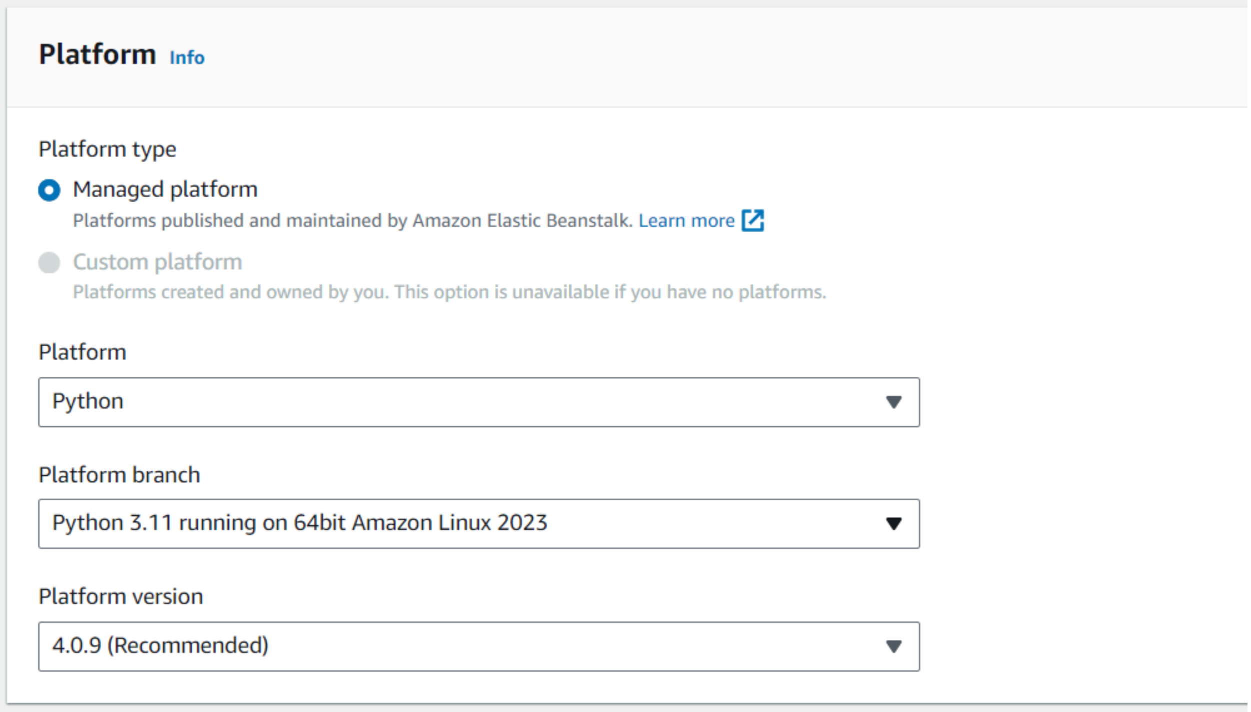
Maximum length of 100 characters.

▸ Application tags (optional)

Environment information Info

Choose the name, subdomain and description for your environment. These cannot be changed later.

Step 3 :- set platform as your selected language after that just click next next no need to do or change anything



Platform Info

Platform type

● Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. Learn more

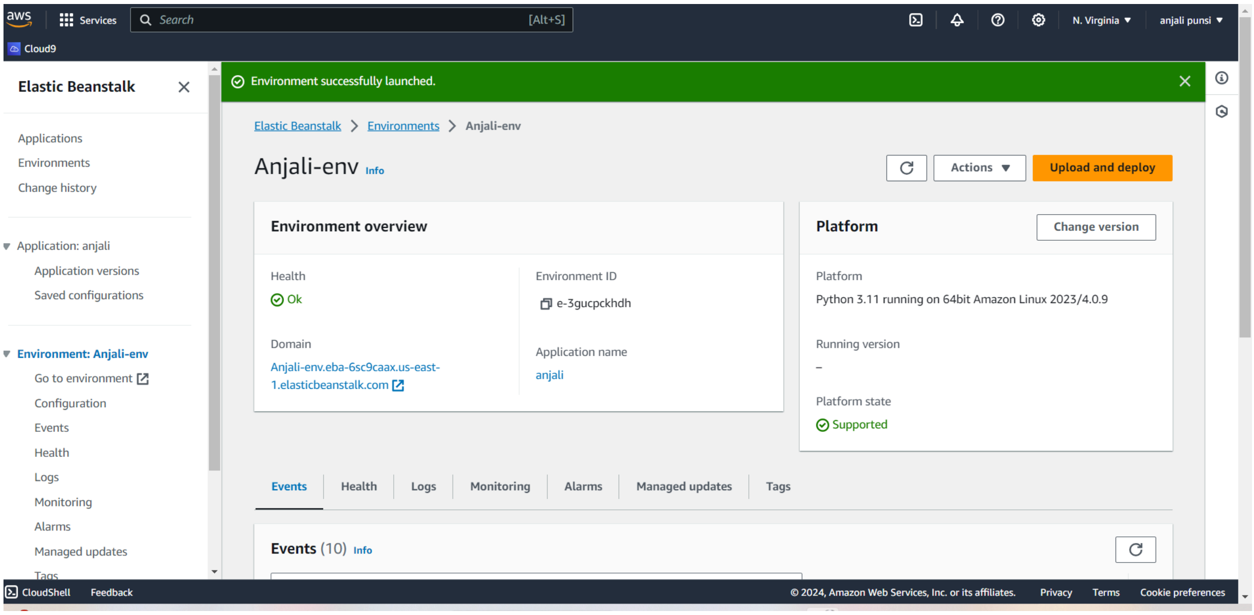
○ Custom platform
Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform: Python

Platform branch: Python 3.11 running on 64bit Amazon Linux 2023

Platform version: 4.0.9 (Recommended)

Step 4:- Click on submit this page Deploy Your Application: Click on the "Deploy" button to deploy your application to Elastic Beanstalk. Elastic Beanstalk will automatically provision the necessary resources and deploy your application.



Environment successfully launched.

Anjali-env Info

Environment overview

Health: Ok

Environment ID: e-3gucpckhdh

Domain: Anjali-env.eba-6sc9caax.us-east-1.elasticbeanstalk.com

Application name: anjali

Platform

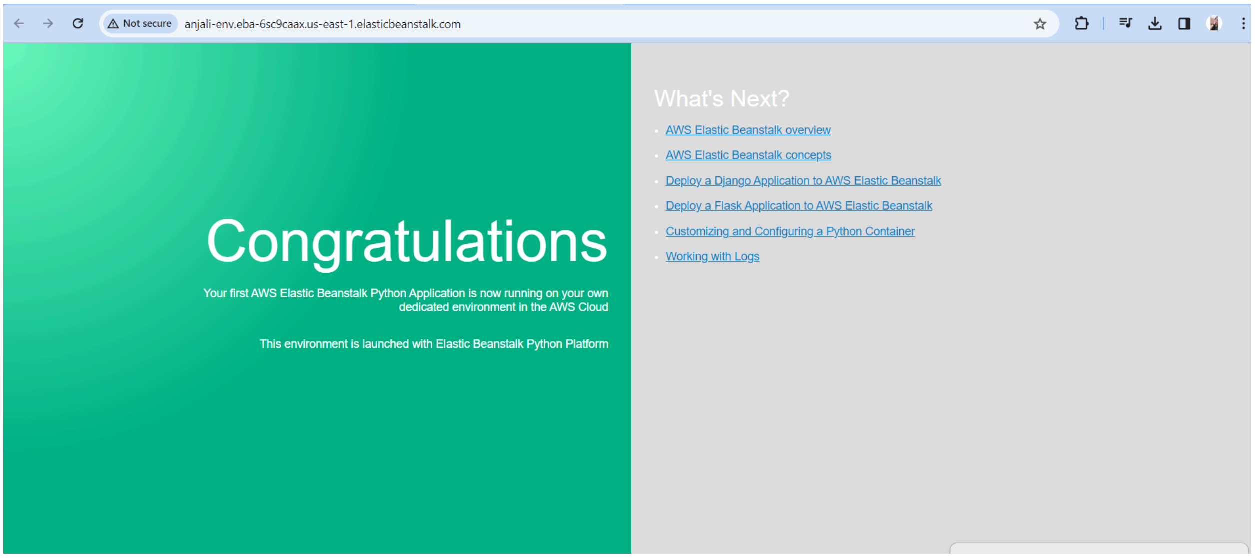
Platform: Python 3.11 running on 64bit Amazon Linux 2023/4.0.9

Running version: –

Platform state: Supported

Events (10) Info

Step 5 :- Access Your Application: Once your application is deployed, you can access it by clicking on the application URL provided by Elastic Beanstalk. You can also monitor the health of your application and view logs and metrics from the Elastic Beanstalk console.



Congratulations

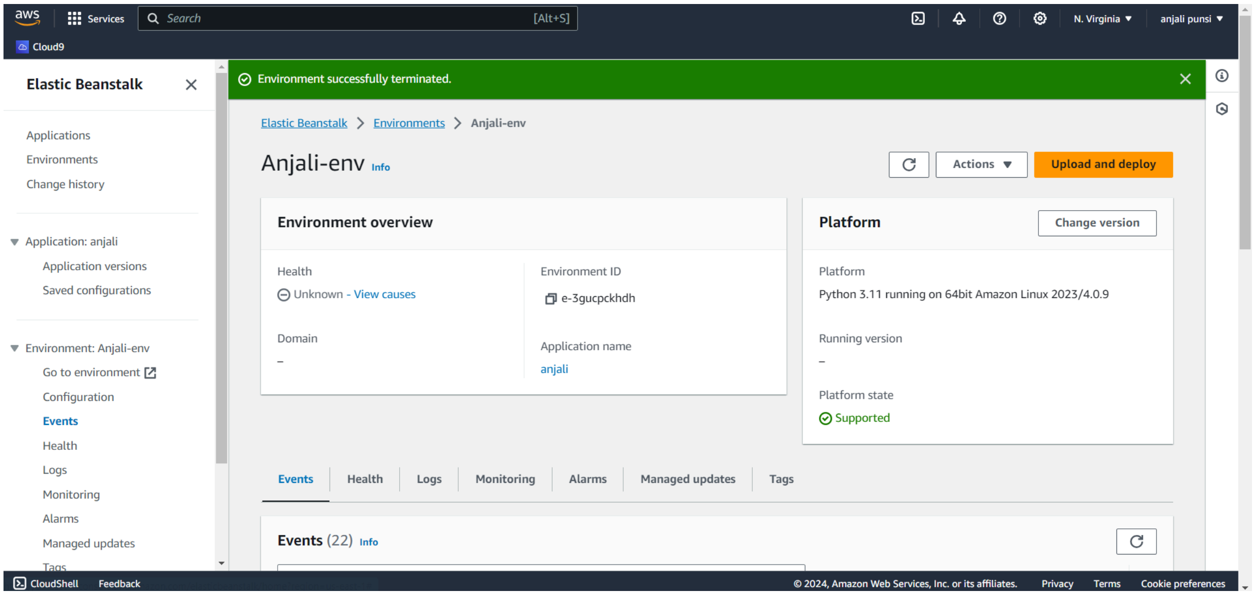
Your first AWS Elastic Beanstalk Python Application is now running on your own dedicated environment in the AWS Cloud

This environment is launched with Elastic Beanstalk Python Platform

What's Next?

- AWS Elastic Beanstalk overview
- AWS Elastic Beanstalk concepts
- Deploy a Django Application to AWS Elastic Beanstalk
- Deploy a Flask Application to AWS Elastic Beanstalk
- Customizing and Configuring a Python Container
- Working with Logs

Step 6:- To Delete the application and Environment (Select it and in Action -Delete/Terminate : give conformation)



Environment successfully terminated.

Anjali-env Info

Environment overview

Health
Unknown - View causes

Environment ID
e-3gucpckhdh

Domain
–

Application name
anjali

Platform

Platform
Python 3.11 running on 64bit Amazon Linux 2023/4.0.9

Running version
–

Platform state
Supported

Events (22) Info

Conclusion:

AWS Elastic Beanstalk is a powerful Platform as a Service (PaaS) offering from Amazon Web Services (AWS) that makes it easy to deploy, manage, and scale web applications and services. By following the steps outlined above, you can quickly create a sample application using AWS Elastic Beanstalk and experience the benefits of PaaS for yourself.