Cloud Computing Candidate Assignment:

Project Overview:

The primary objective of this project is to develop a scalable, robust, and secure web application capable of handling high traffic with minimal downtime. The application will be hosted on Amazon Web Services (AWS), utilizing **Elastic Beanstalk**, **EC2**, and **RDS** to ensure dynamic resource scaling, high availability, and efficient resource management. This infrastructure will enable the application to adjust its capacity automatically based on real-time traffic, ensuring optimal performance and cost-effectiveness.

Name of the candidate:

Chitra Sri Krishna Prasanna

AWS/Code

Assignment Technologies:

The project encompasses the following components:

Web Application Development:

- Building a responsive, user-friendly web application for end-users.
- Ensuring efficient load handling and session management.

Elastic Beanstalk for Deployment:

- AWS Elastic Beanstalk will be used to deploy and manage the application automatically.
- o Simplifies scaling by adjusting the environment based on traffic demands.

EC2 Instances:

- Using EC2 for compute resources, with the ability to auto-scale as traffic increases.
- EC2 will provide the backbone for processing power, ensuring the application can handle high loads.

RDS (Relational Database Service):

- AWS RDS will be used to store and manage application data.
- Ensures scalability, security, and performance for database transactions.

High Availability and Auto-Scaling:

- Auto-scaling groups will dynamically add or remove EC2 instances based on predefined traffic thresholds.
- Elastic Load Balancing (ELB) will distribute incoming traffic across EC2 instances for reliability.

Monitoring and Optimization:

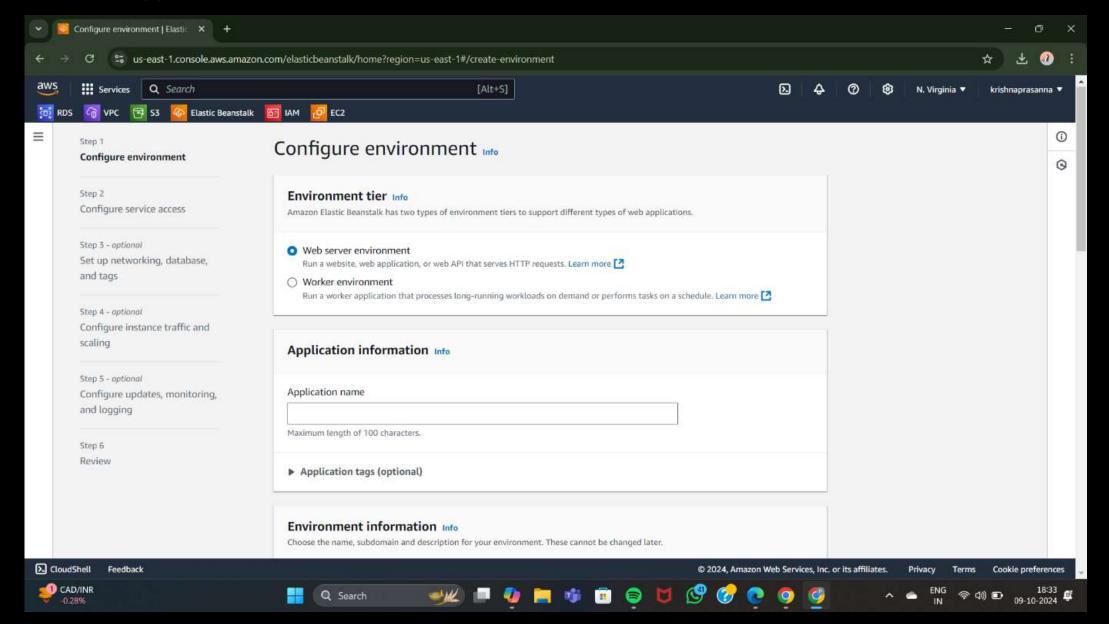
- o AWS CloudWatch will monitor application performance and resource utilization.
- Logs and metrics will be analyzed to optimize resource use, application uptime, and cost-efficiency.

Security and Compliance:

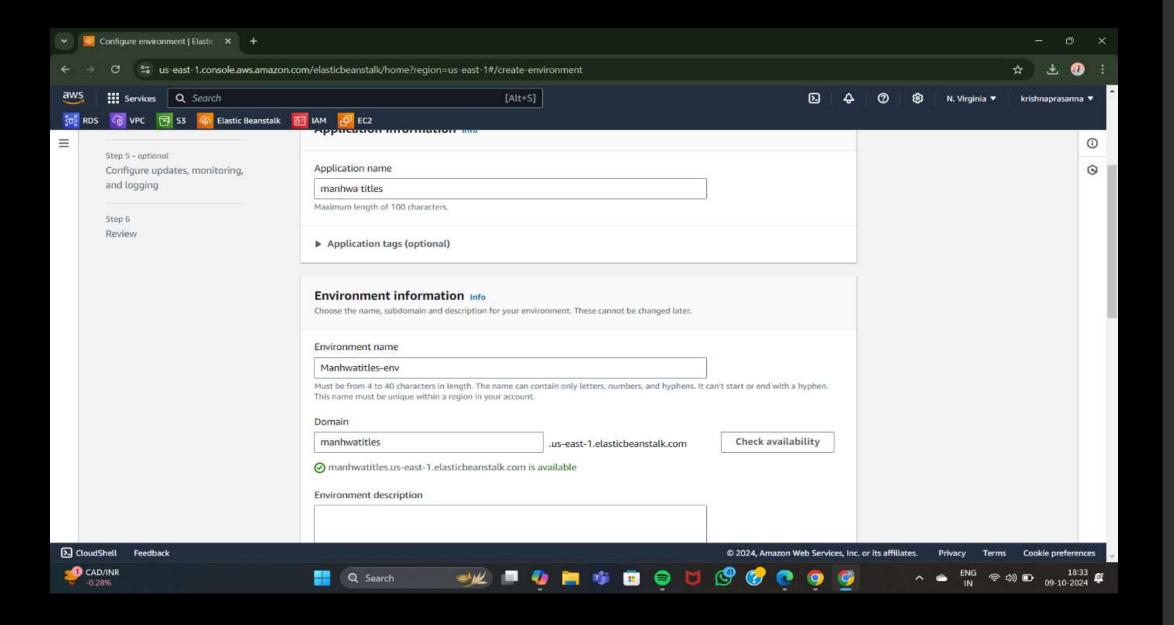
- o Implementing AWS security best practices, including IAM roles, VPC security groups, and encryption.
- Ensuring compliance with industry standards to protect sensitive data.

Assignment Setup:

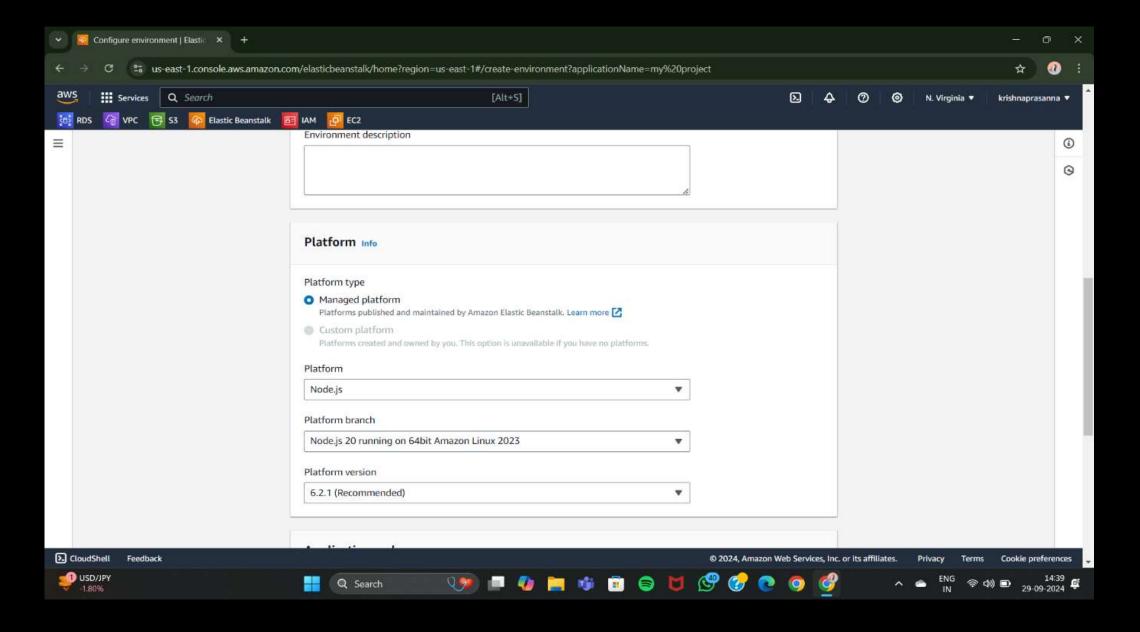
Create application in AWS Elastic Beanstalk:



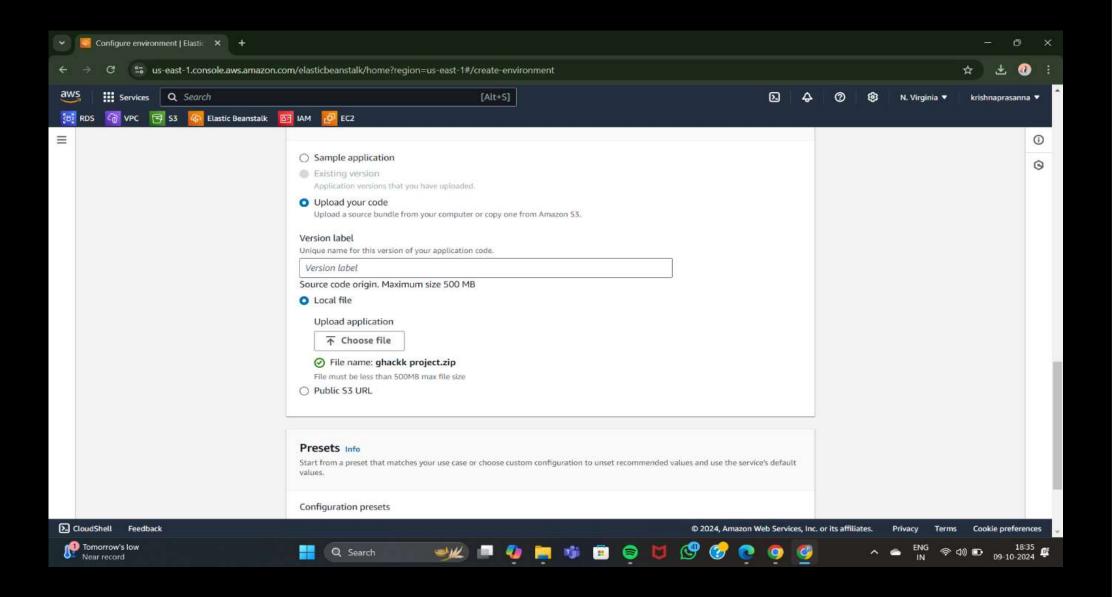
Configure environment:



Platform selected - Node.js:



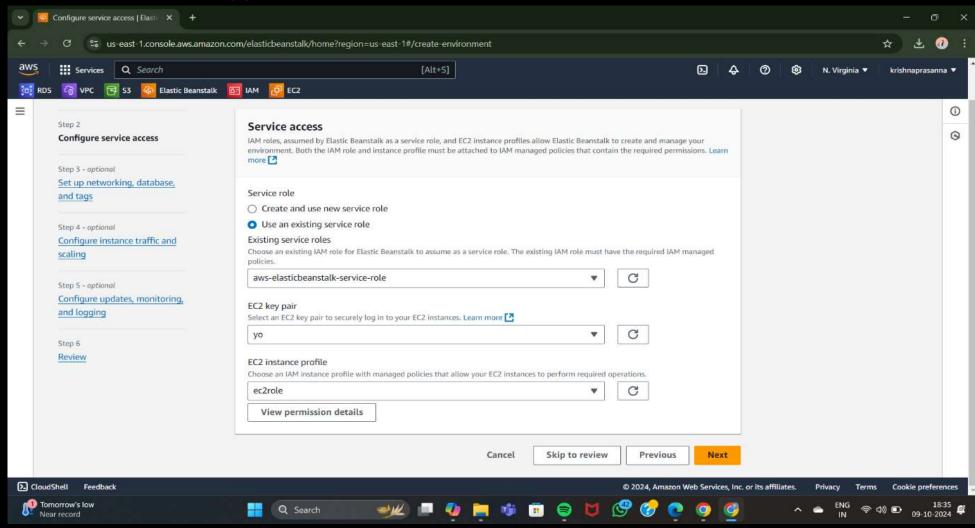
Web application code uploaded:



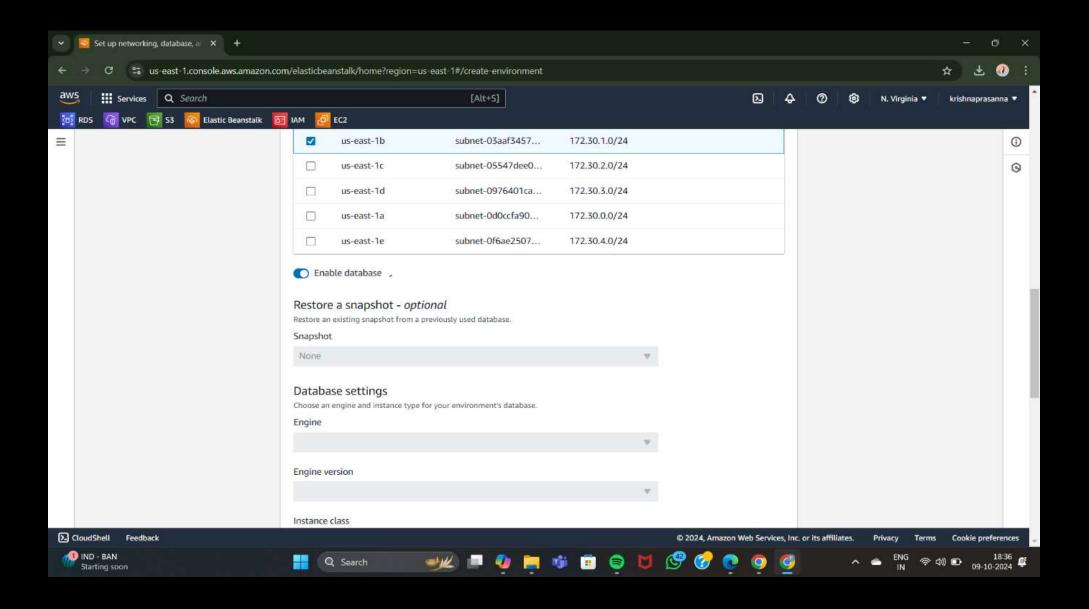
Service role created and applied

EC2 key pair created and applied

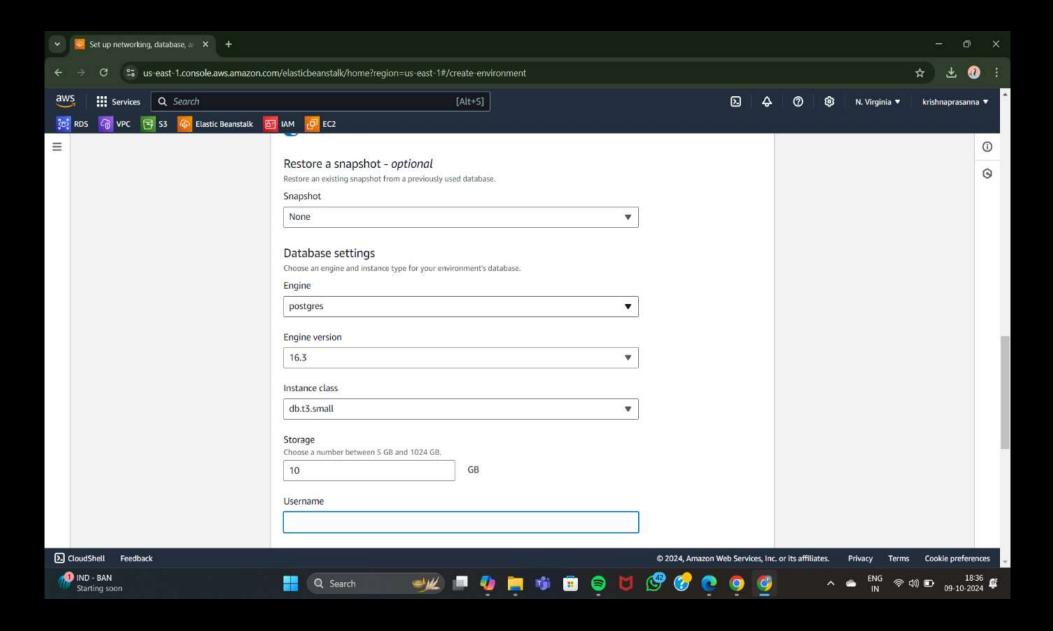
EC2 role created and applied



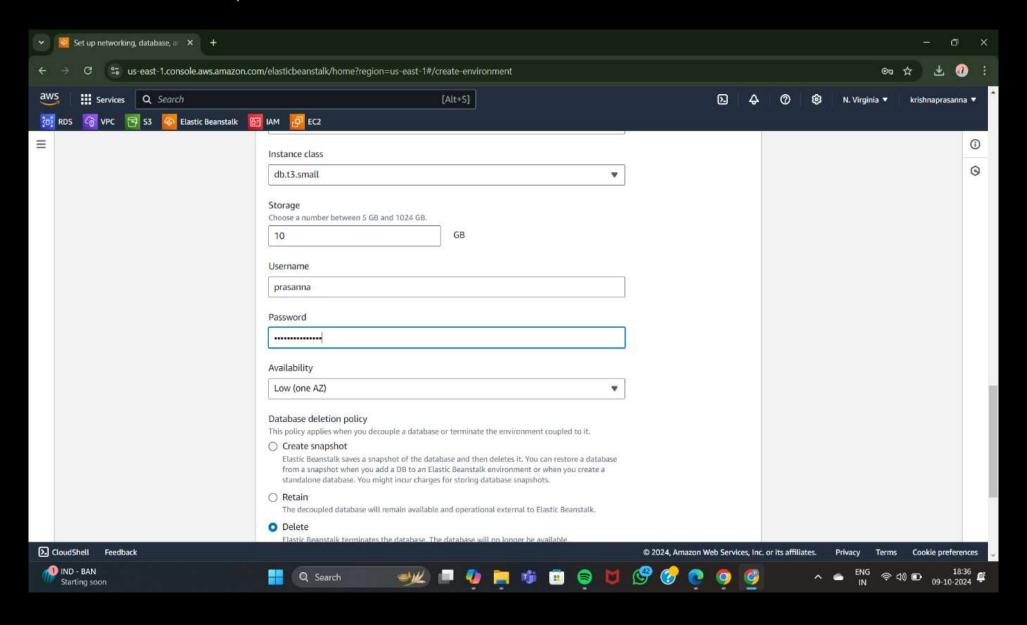
Subnets selected as required in the regions:



Database connected:

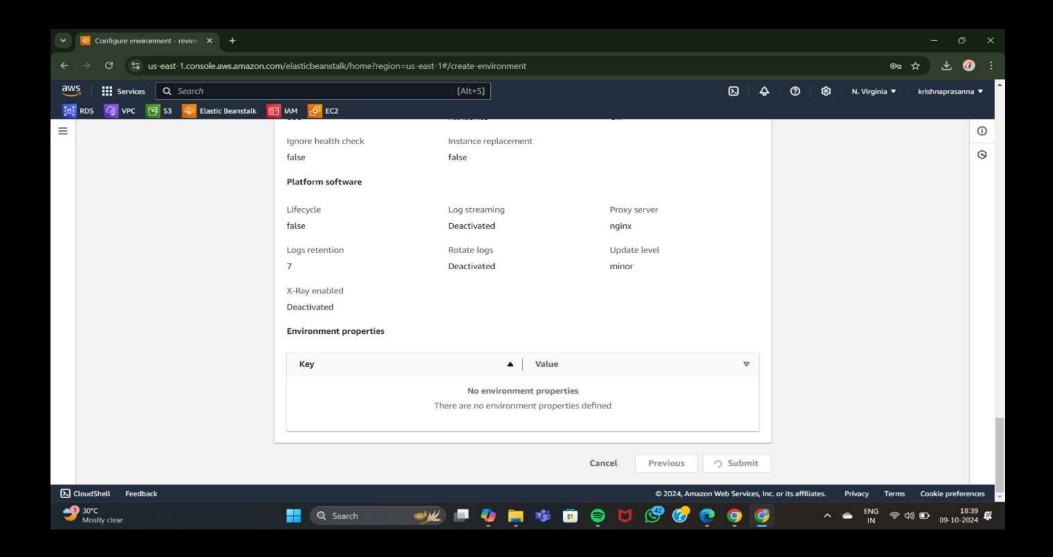


Set Username and password:

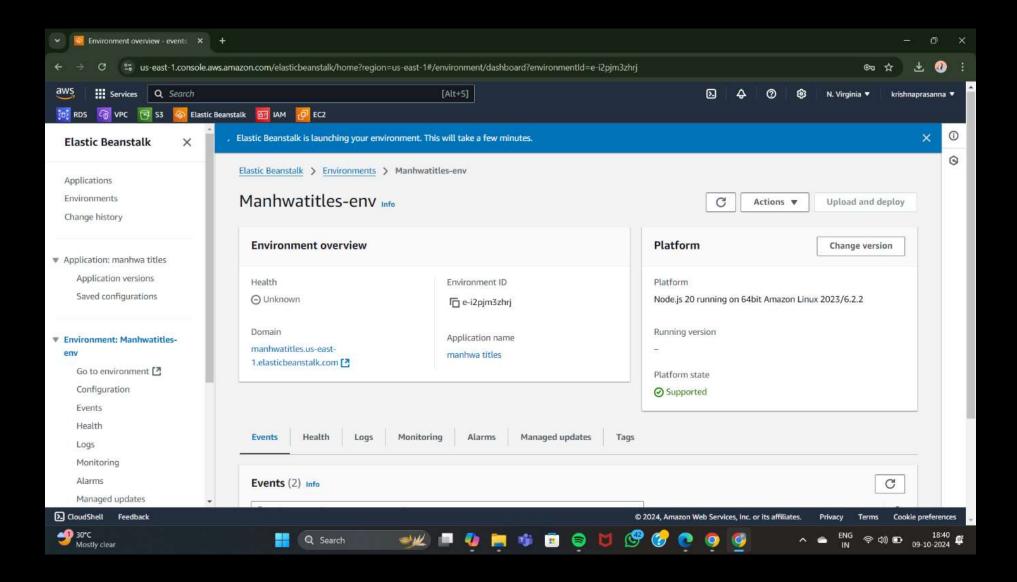


Configure the environment and review after all the steps:

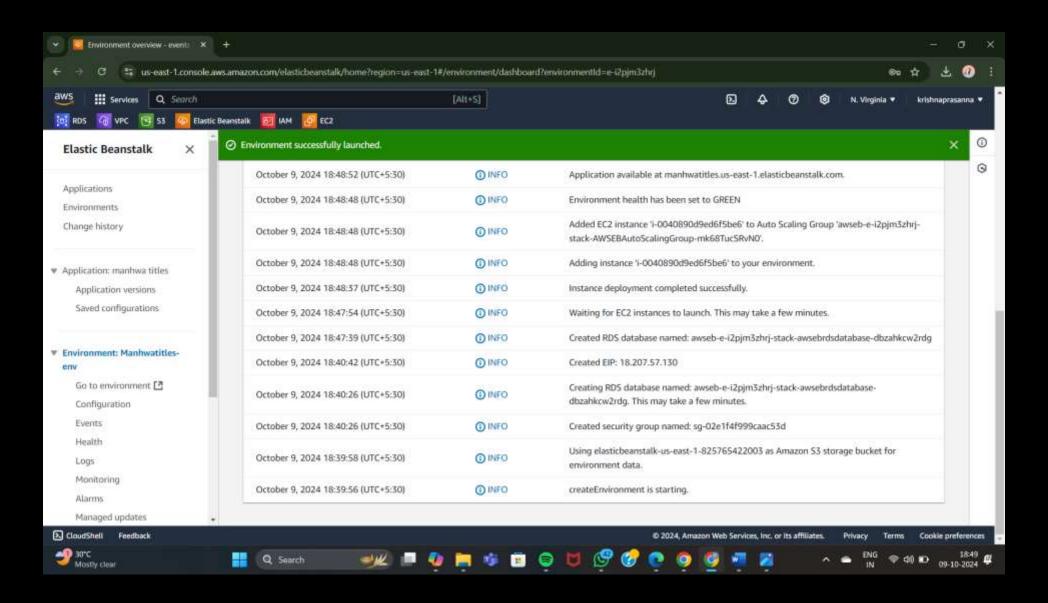
Create and submit:



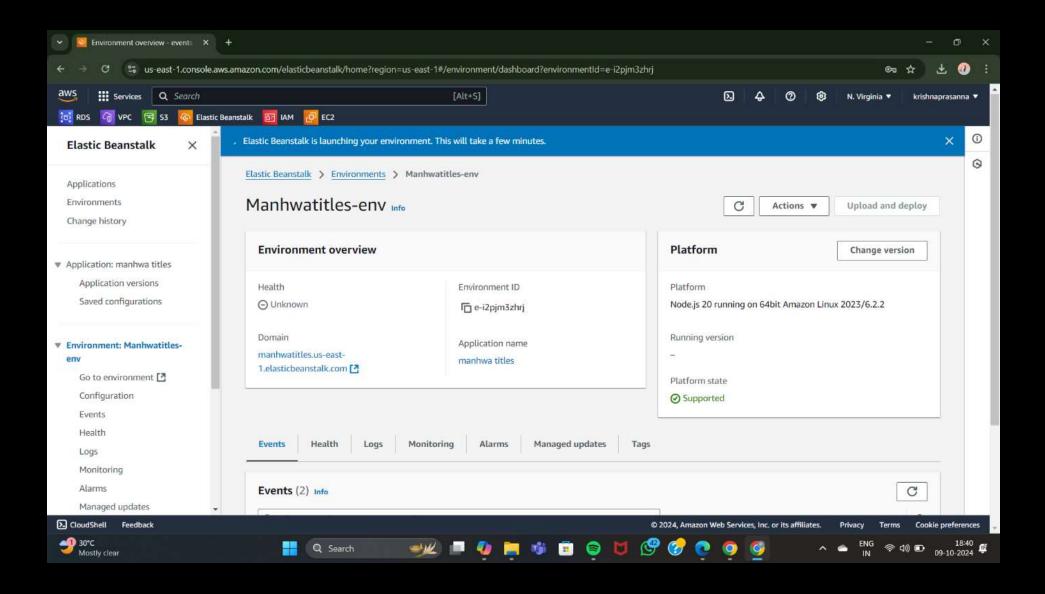
Your application takes time to deploy ...wait for a while:



Check the events log so you will get you know what's happening...:

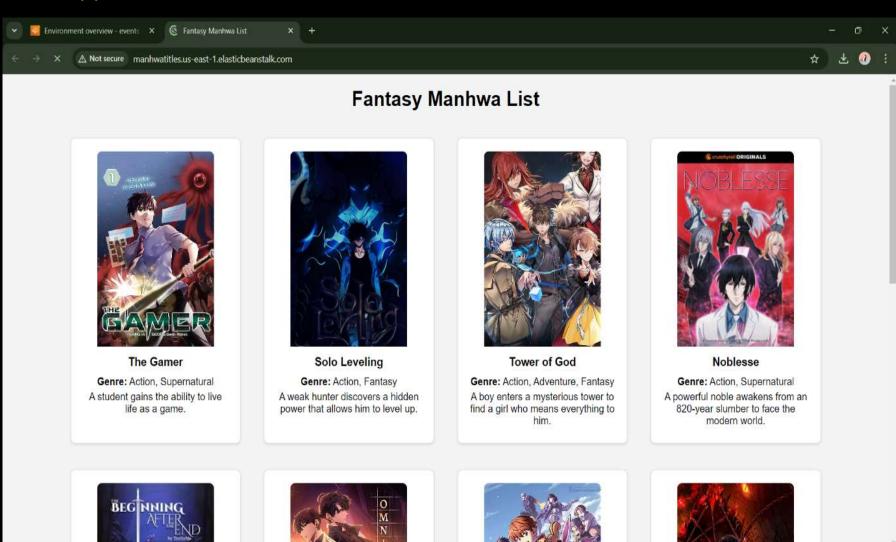


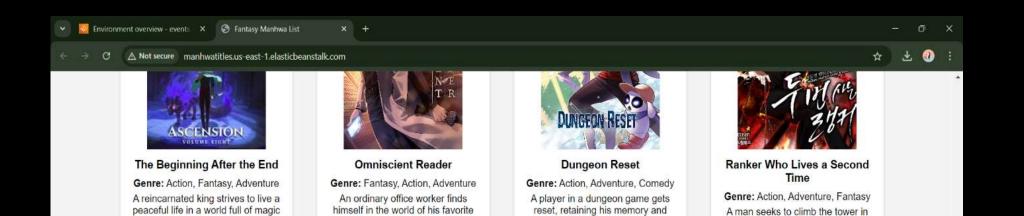
After the deployment now you will get the domain link ,click on it :



Web application created:

30°C Mostly clear







Be Special

and beasts.





web novel.

Genre: Action, Supernatural,



abilities to start over.

The Legendary Moonlight Sculptor



his quest for revenge after the death of his brother.

Rebirth of the Urban **Immortal Cultivator**



































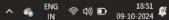












Assignment Resources/ Reference:

AWS Elastic Beanstalk

https://aws.amazon.com/elasticbeanstalk/

Amazon S3

https://aws.amazon.com/s3/

Amazon EC2

https://aws.amazon.com/ec2/

Amazon RDS

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

IAM

https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html

AWS Key Management Service

https://docs.aws.amazon.com/kms/latest/developerguide/overview.html

Thank you