

**CSCI 5409 – Cloud Computing**

**Assignment 5**

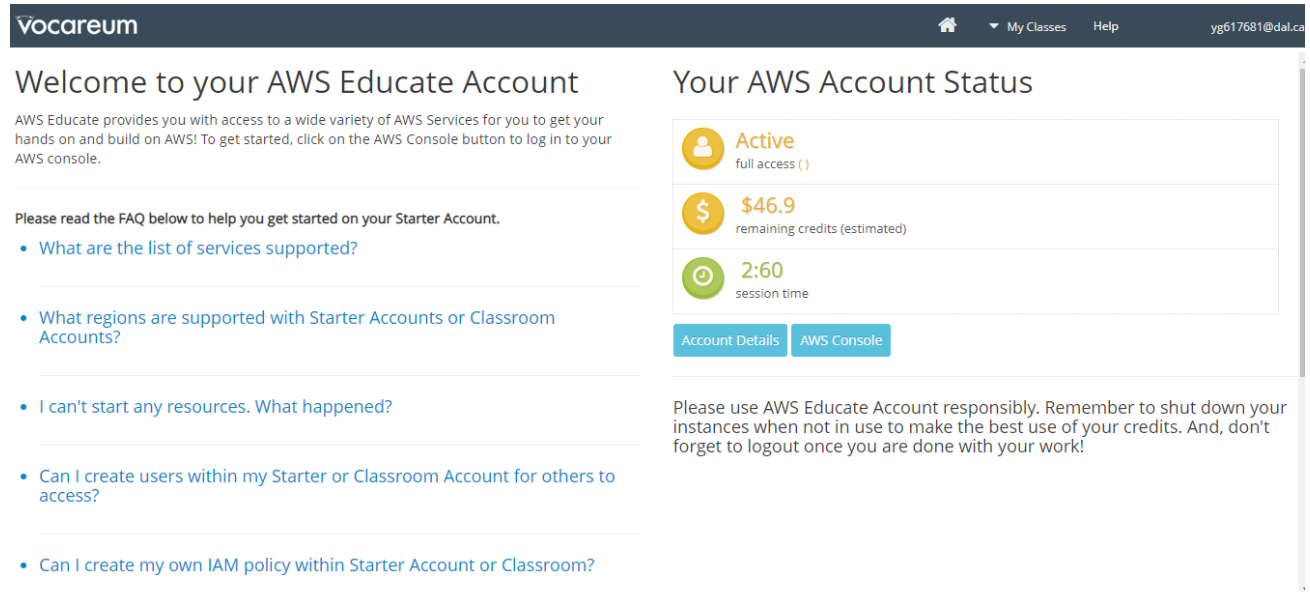
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### A. *AWS Elastic beanstalk:*

The AWS Elasticbeanstalk was used to deploy the Sails js application. Since the Elastic beanstalk takes care of the auto scaling the deployment is quite easy. In the assignment 5 AWS RDS database was used to maintain the data.



**Fig 1: AWS Educate account**

### B. *Deficiencies:*

All assignment requirements are successfully performed.

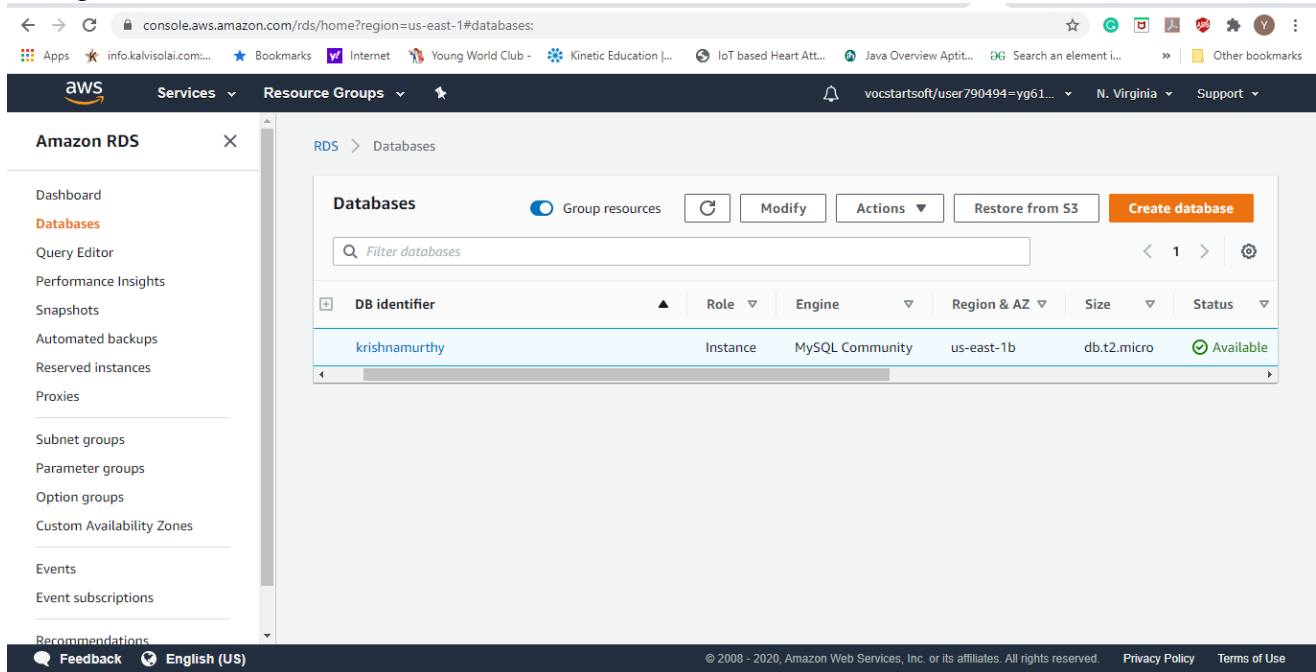
### C. *Proud of my work:*

I have successfully deployed the docker containerized sails js application in AWS Elasticbeanstalk. The AWS RDS which provided a free DB creation was used in assignment 5 to store the data.

## D. Steps performed to achieve the endpoint result:

### 1. AWS RDS:

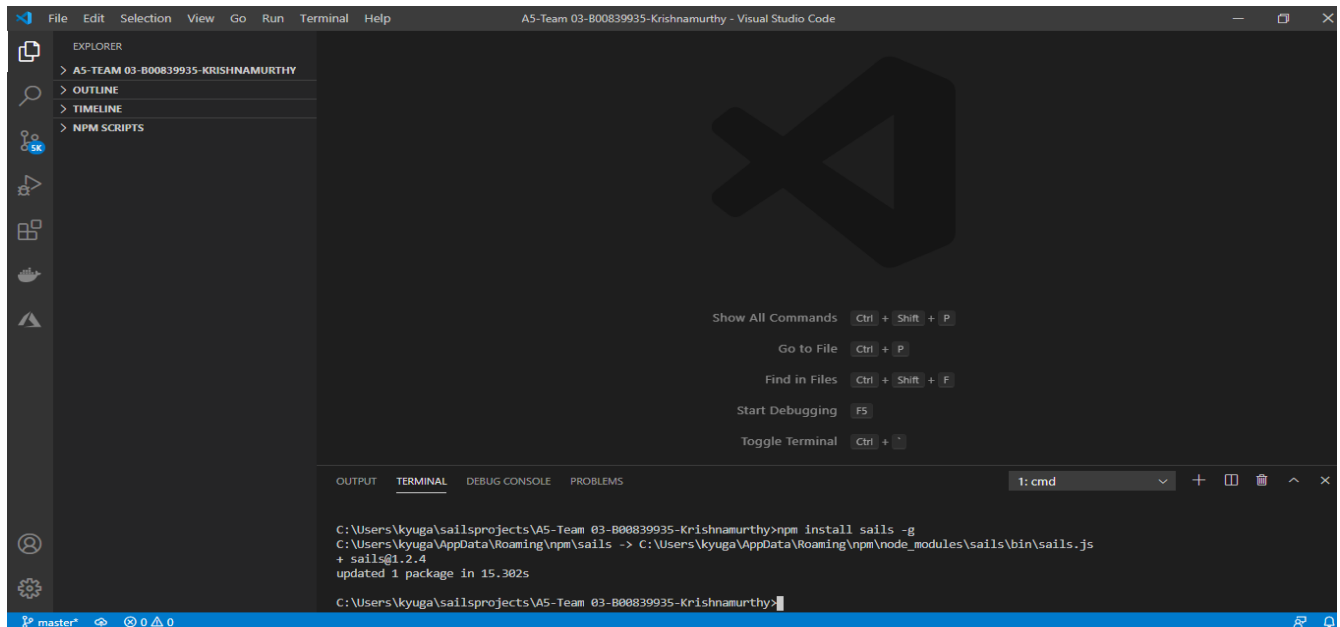
In assignment 3 the steps needed to construct a database in AWS have already been listed. So, I just provided my last name with the screenshot of the created database, instead of including all the steps for creating a database in AWS.



**Fig 1: The DB created with my last name with available status in AWS[58]**

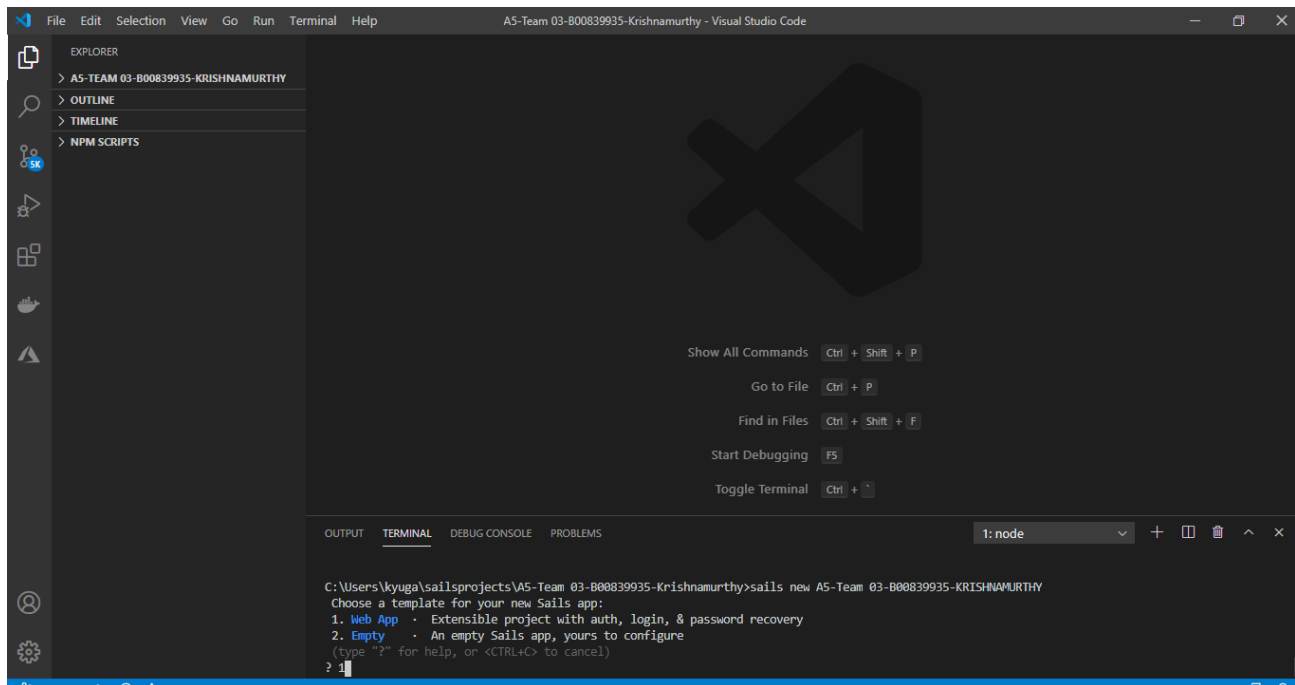
### 2. Installing sails app in the local desktop globally

The sails is installed in the local desktop using the commands given in the tutorial in brightspace. The screenshot of the installment of the sails app is shown below



The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The main editor area displays the Sails.js logo and a list of keyboard shortcuts: Show All Commands (Ctrl + Shift + P), Go to File (Ctrl + P), Find in Files (Ctrl + Shift + F), Start Debugging (F5), and Toggle Terminal (Ctrl + `). The Terminal panel at the bottom is active, showing the command prompt with the following text: `C:\Users\kyuga\sailsprojects\A5-Team 03-B00839935-Krishnamurthy>npm install sails -g`, `C:\Users\kyuga\AppData\Roaming\npm\sails -> C:\Users\kyuga\AppData\Roaming\npm\node_modules\sails\bin\sails.js`, `+ sails@1.2.4`, and `updated 1 package in 15.302s`. The status bar at the bottom indicates the current file is `C:\Users\kyuga\sailsprojects\A5-Team 03-B00839935-Krishnamurthy\`.

**Fig 2: Installing sails app in the local desktop**



The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The main editor area displays the Sails.js logo and a list of keyboard shortcuts: Show All Commands (Ctrl + Shift + P), Go to File (Ctrl + P), Find in Files (Ctrl + Shift + F), Start Debugging (F5), and Toggle Terminal (Ctrl + `). The Terminal panel at the bottom is active, showing the command prompt with the following text: `C:\Users\kyuga\sailsprojects\A5-Team 03-B00839935-Krishnamurthy>sails new A5-Team 03-B00839935-KRISHNAMURTHY`, `Choose a template for your new Sails app:`, `1. Web App · Extensible project with auth, login, & password recovery`, `2. Empty · An empty Sails app, yours to configure`, and `(type "?" for help, or <CTRL+C> to cancel)`. The status bar at the bottom indicates the current file is `C:\Users\kyuga\sailsprojects\A5-Team 03-B00839935-Krishnamurthy\`.

**Fig 3: Creating a new web app**

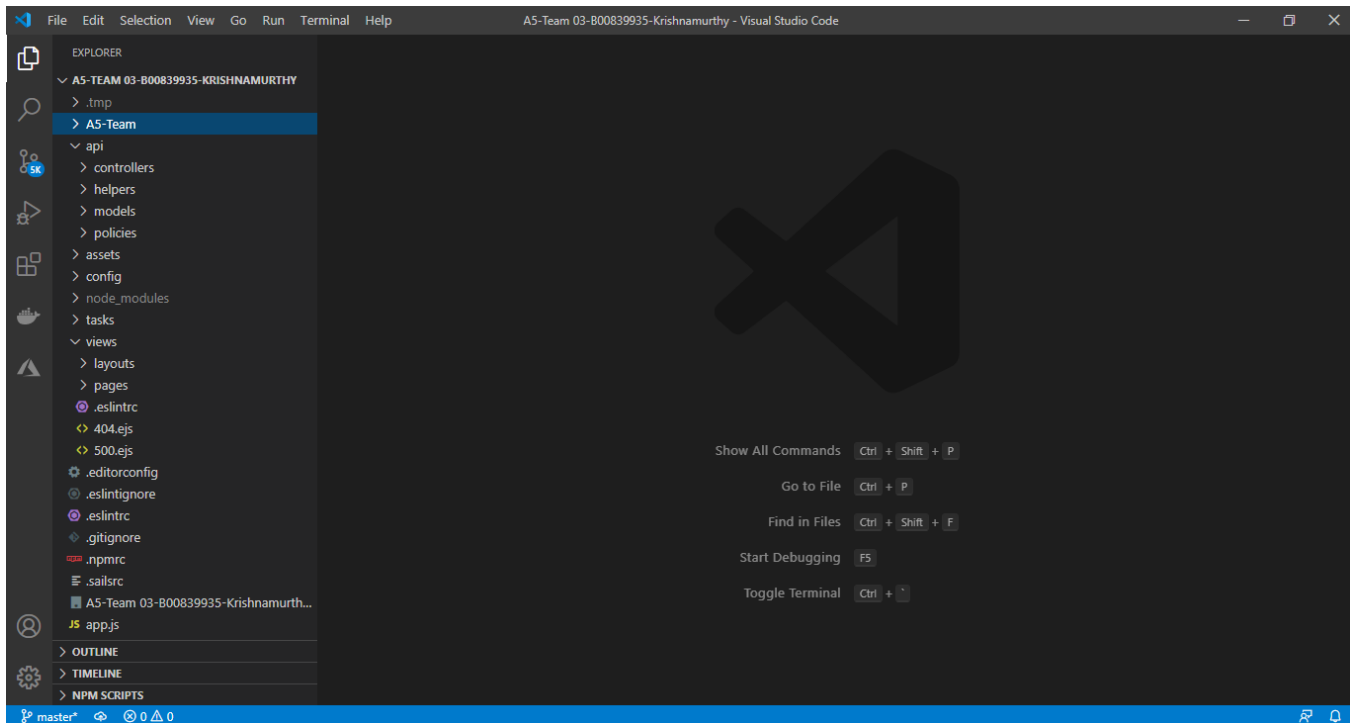


Fig 4: Folder and directory structure

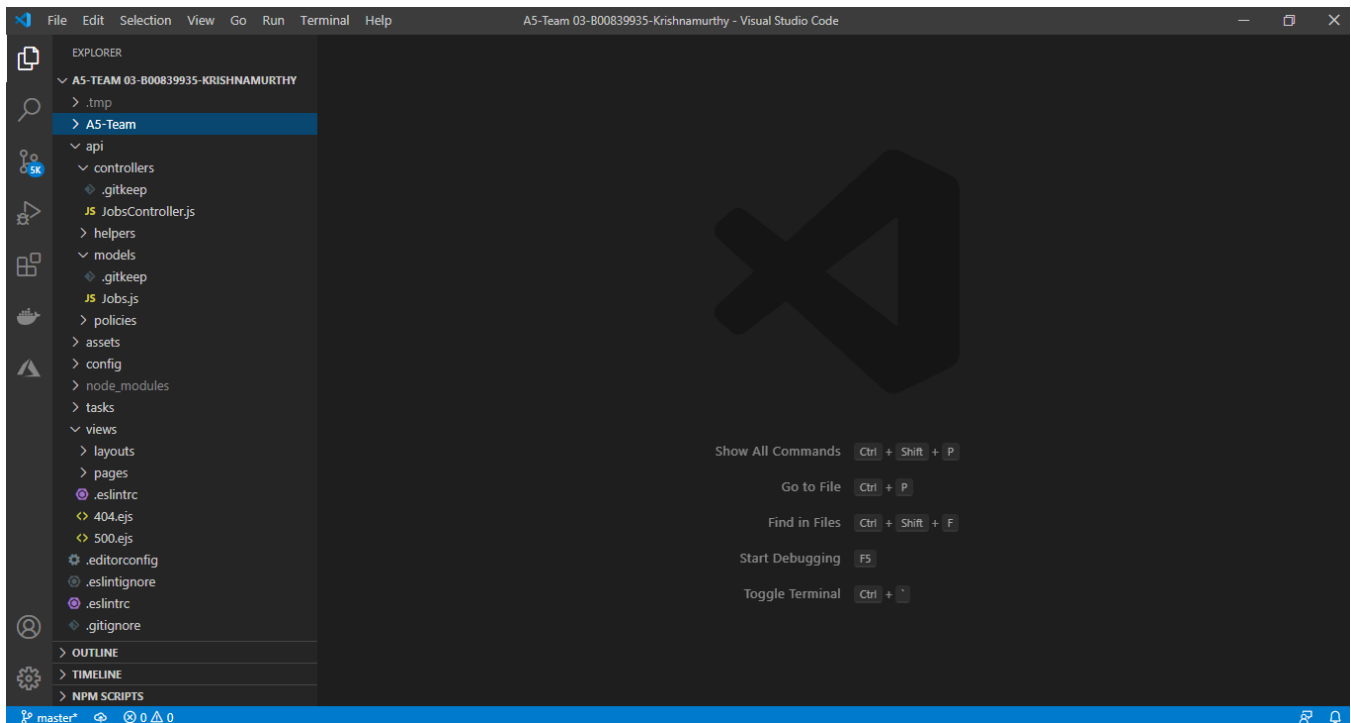
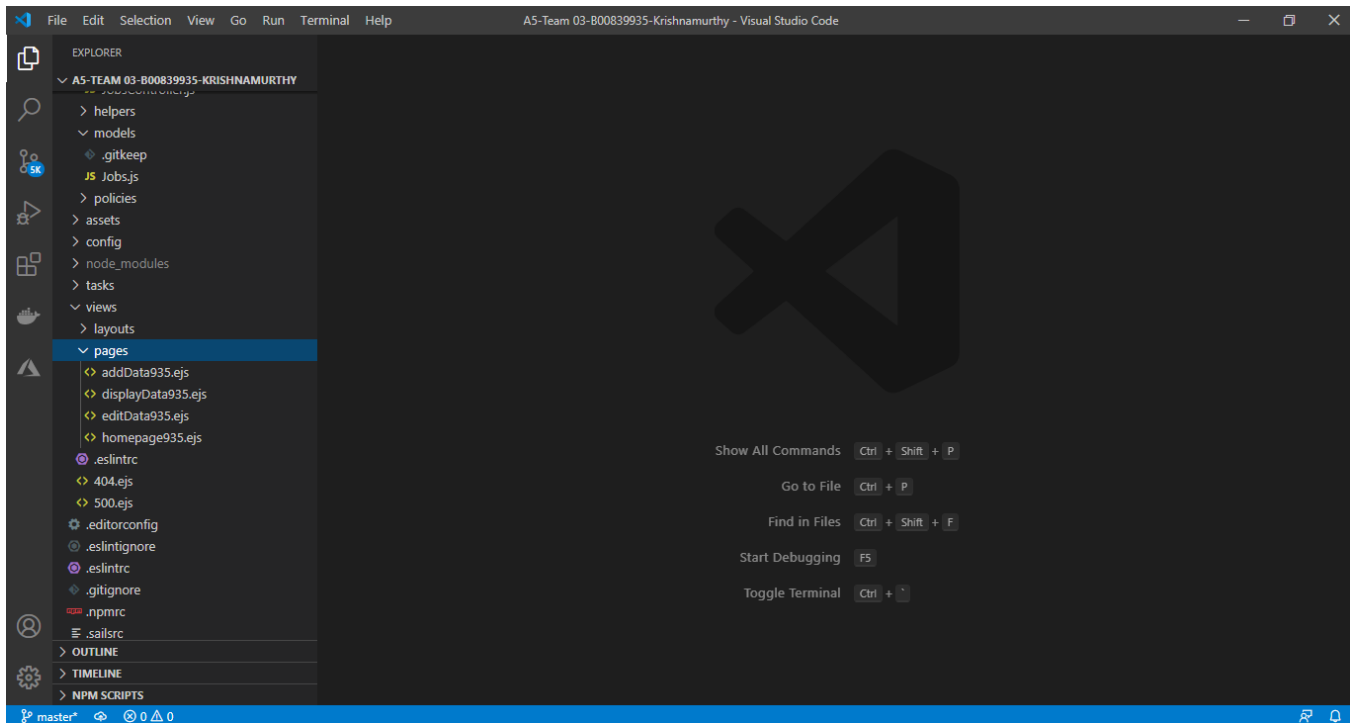
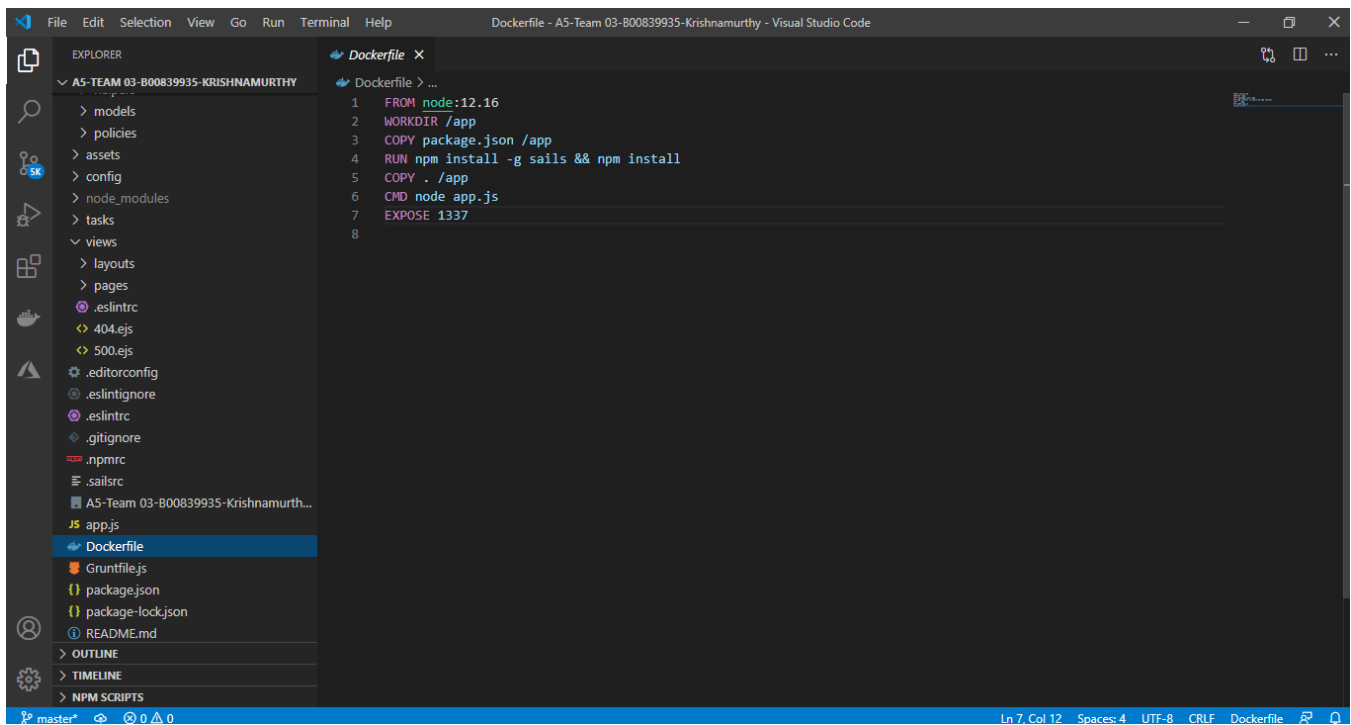


Fig 5: Created the jobs API



**Fig 6: Created four pages required for the assignment 5**



**Fig 7: Created the Docker file**

```
MINGW64/c/Users/kyuga/sailsprojects/A5-Team 03-B00839935-Krishnamurthy
debug: -----
debug: :: Fri Jul 03 2020 15:56:11 GMT+0000 (Coordinated Universal Time)
debug: Environment : development
debug: Port : 1337
debug: -----

yuga@LAPTOP-KLQT3VEC MINGW64 ~/sailsprojects/A5-Team 03-B00839935-Krishnamurthy (master)
$ docker build -t sailsapp935 .
Sending build context to Docker daemon 114.1MB
Step 1/7 : FROM node:12.16
--> bdc973cfa07
Step 2/7 : WORKDIR /app
--> Using cache
--> 513a89c8a815
Step 3/7 : COPY package.json /app
--> Using cache
--> d835141c5310
Step 4/7 : RUN npm install -g sails && npm install
--> Using cache
--> 4f4ba200b509
Step 5/7 : COPY . /app
--> 4fec7a02c10
Step 6/7 : CMD node app.js
--> Running in 0a5392757483
Removing intermediate container 0a5392757483
--> 420ff03bf6a9
Step 7/7 : EXPOSE 3002
--> Running in 6416174ebdd9
Removing intermediate container 6416174ebdd9
--> caefeb50b2ae
Successfully built caefeb50b2ae
Successfully tagged sailsapp935:latest
SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have '-rwxr-xr-x' permissions. It is recommended to double check and reset permissions for sensitive files and directories.

yuga@LAPTOP-KLQT3VEC MINGW64 ~/sailsprojects/A5-Team 03-B00839935-Krishnamurthy (master)
$
```

Fig 8: Successful Docker build and run

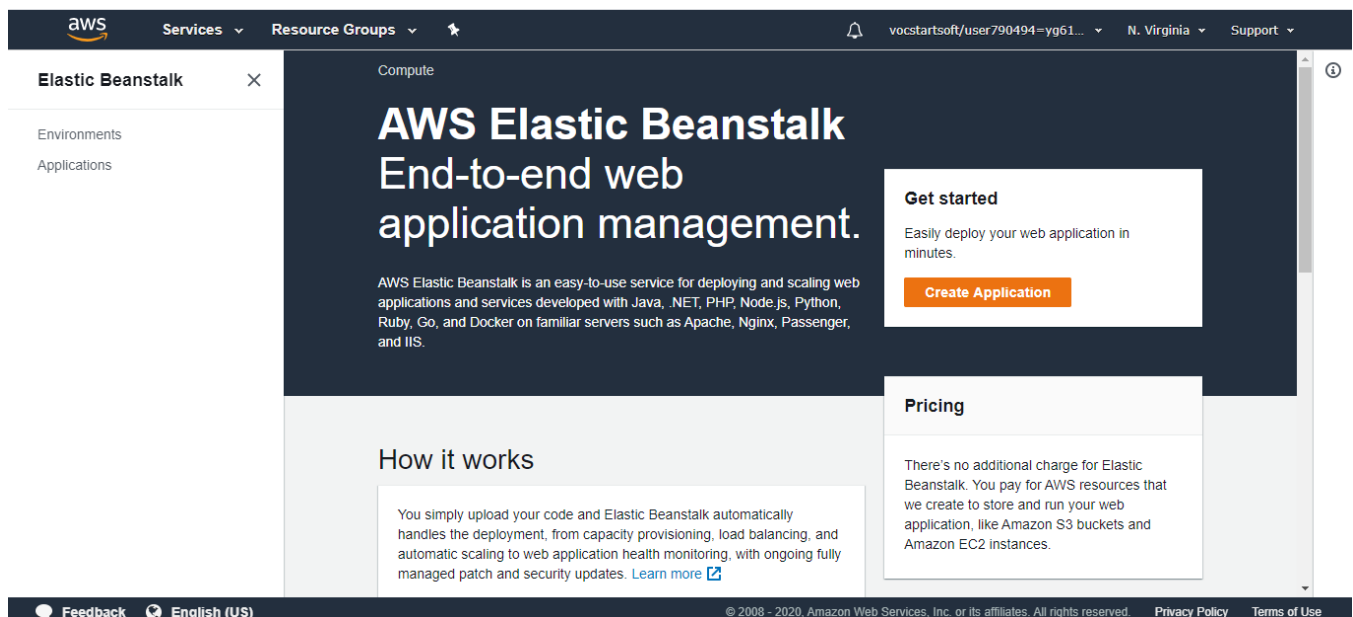
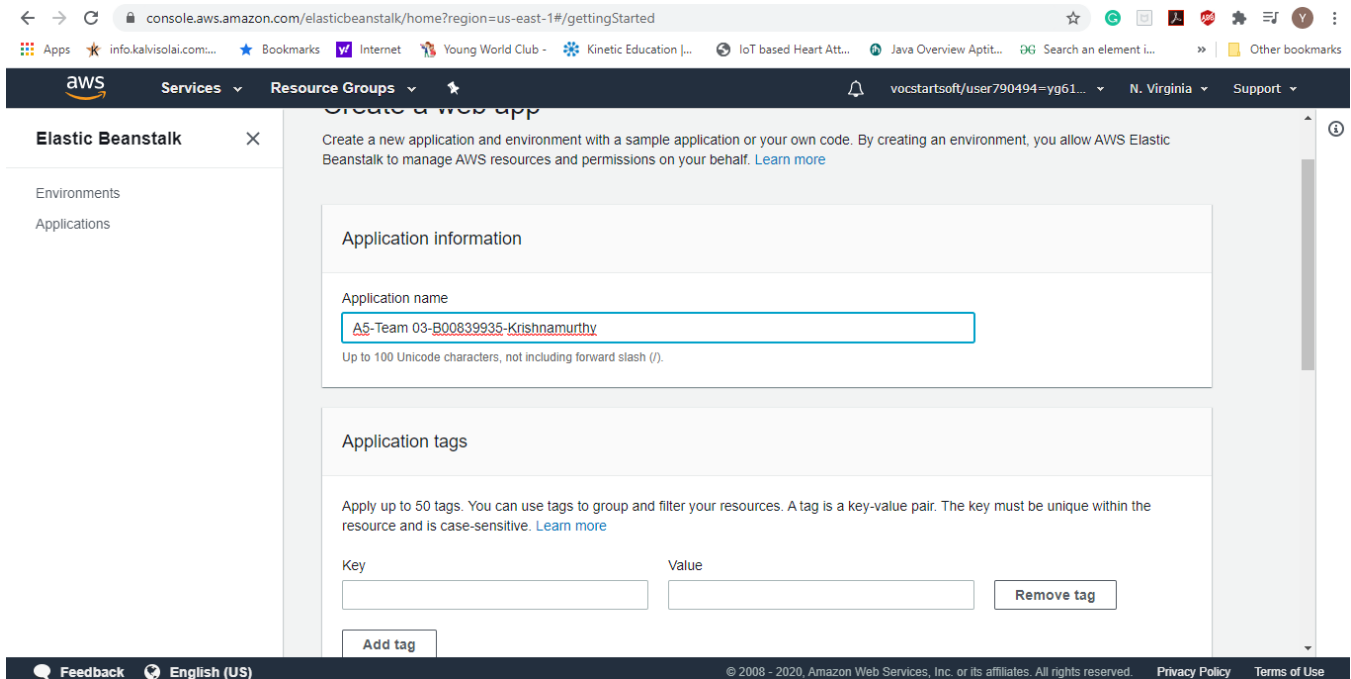
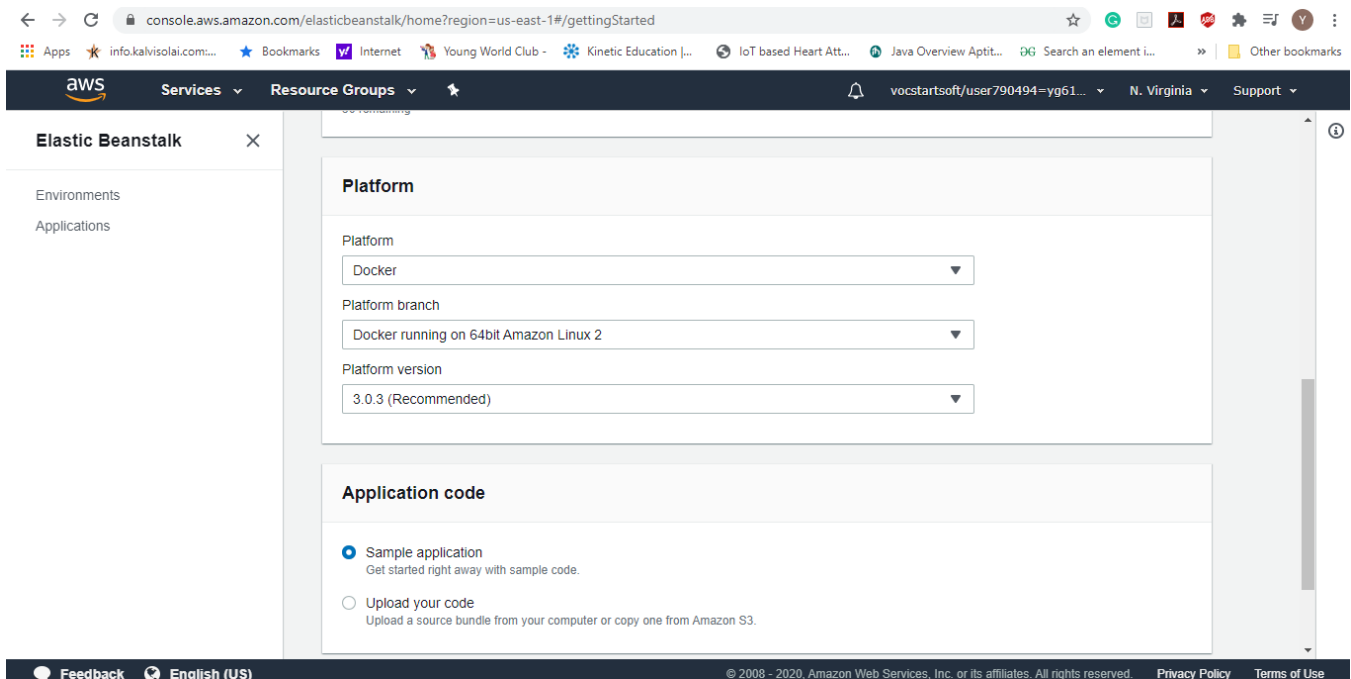


Fig 9: Navigating to EBS services in AWS

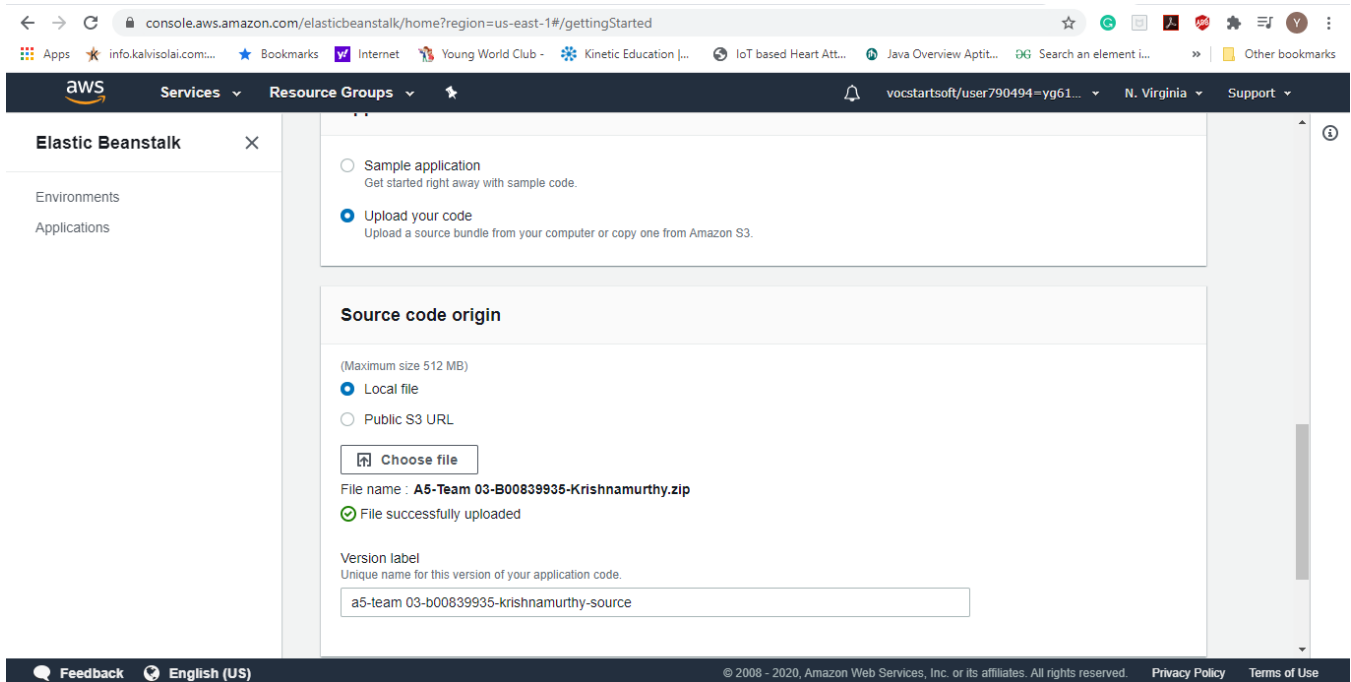


**Fig 10: Creating a new application in Elastic beanstalk**

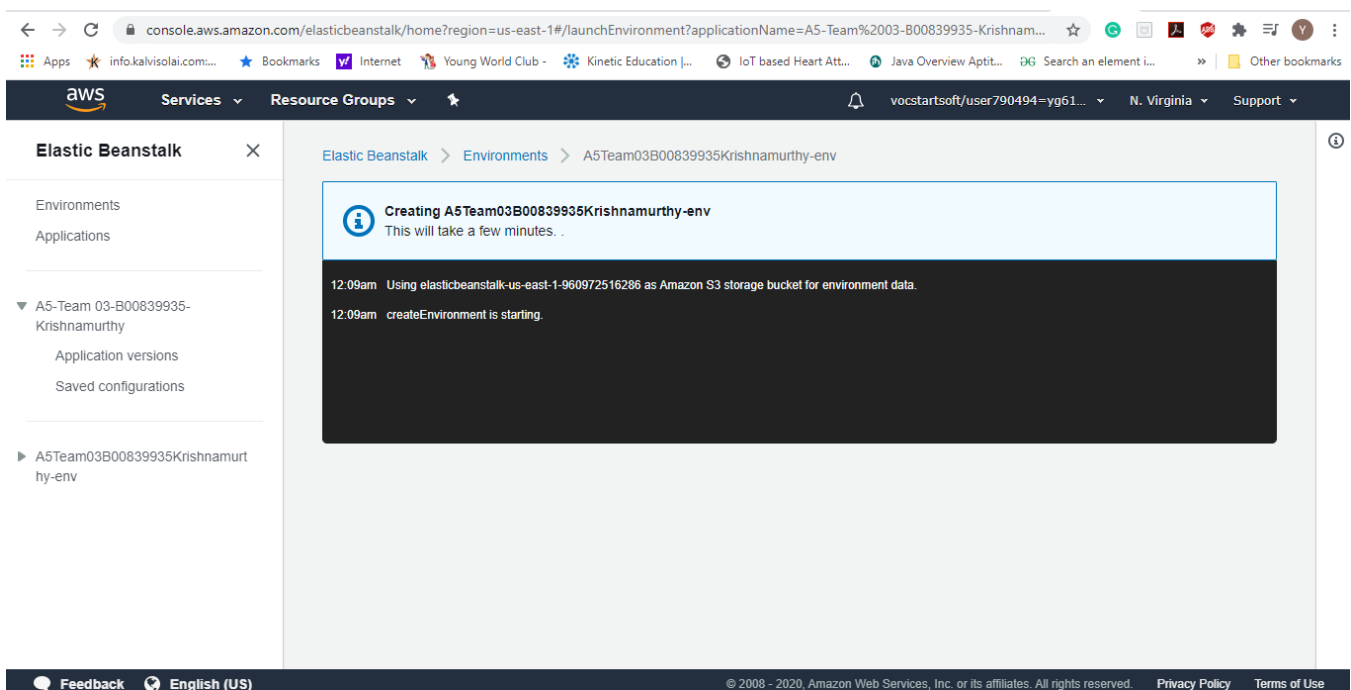


**Fig 11: Selecting Docker platform**





**Fig 12: Uploading the existing sails js code file from desktop to EBS**



**Fig 13: Starting the environment after the create application in EBS**

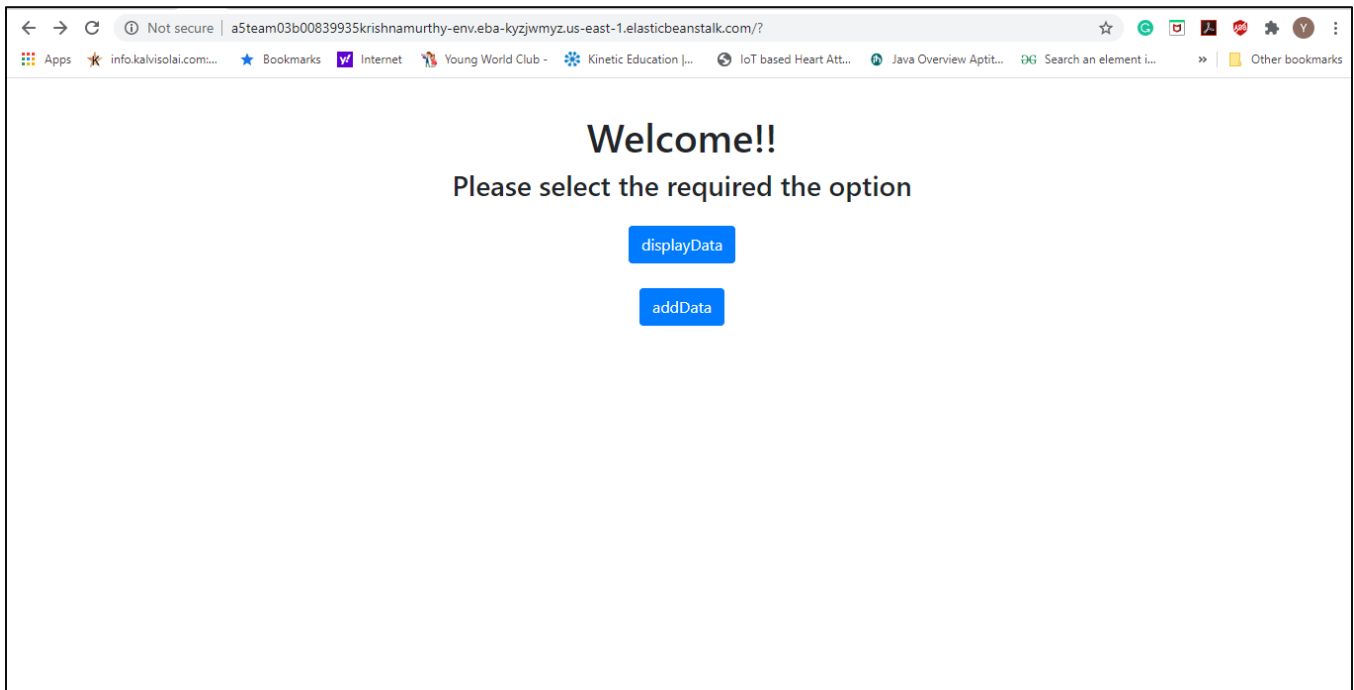
The screenshot shows the AWS Elastic Beanstalk console. The left sidebar contains a navigation menu with 'Environments' and 'Applications'. The main content area displays the details for the environment 'A5Team03B00839935Krishnamurthy-env'. The health status is 'Ok' with a green checkmark icon. The running version is 'a5-team 03-b00839935-krishnamurthy-source' and the platform is 'Docker running on 64bit Amazon Linux 2/3 0.3'. There are buttons for 'Refresh', 'Actions', 'Upload and deploy', and 'Change'. Below the main details, there is a 'Recent events' section with a 'Show all' button.

Fig 14: Successful deployment of the application in the EBS

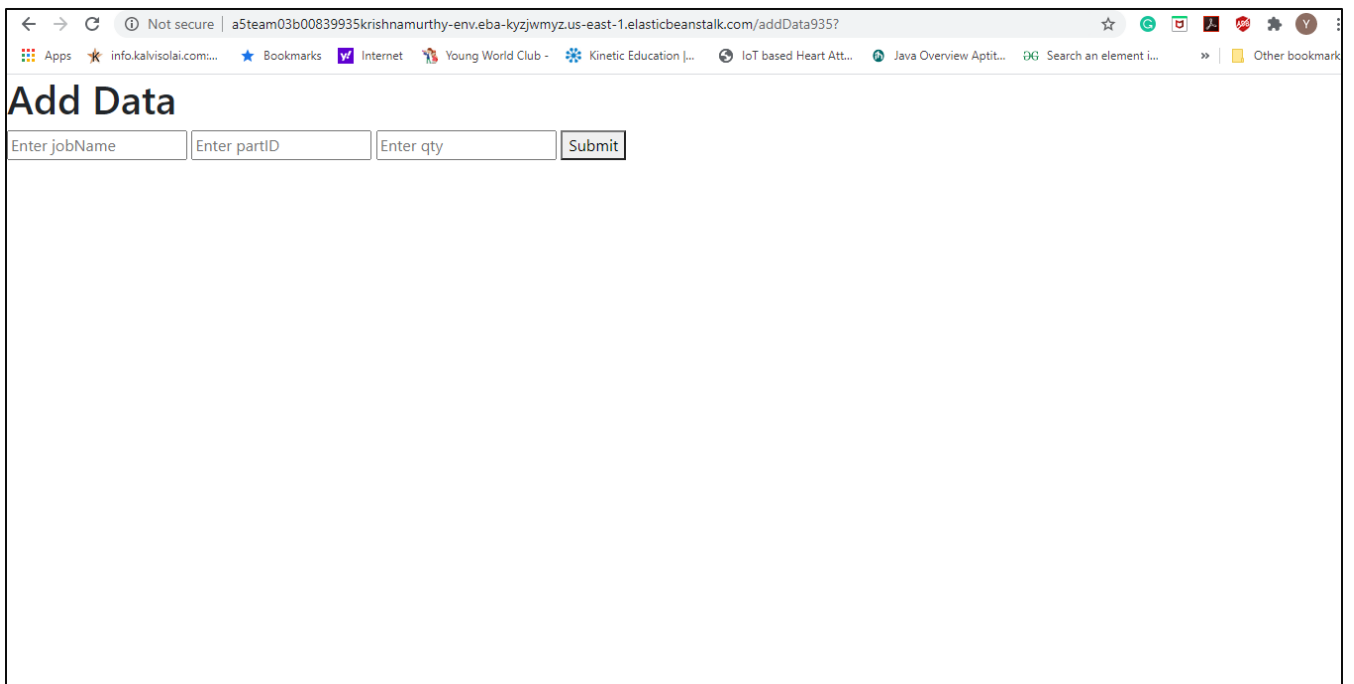
The screenshot shows the AWS Elastic Beanstalk console with the 'All environments' view. A table lists the environments. The environment 'A5Team03B00839935Krishnamurthy-env' is highlighted, showing a health status of 'Ok'.

Environment name	Health	Application name	Date created	Last modified	URL
A5Team03B00839935Krishnamurthy-env	Ok	A5-Team 03-B00839935-Krishnamurthy	2020-07-08 00:09:31 UTC-0300	2020-07-08 00:14:49 UTC-0300	A5Team03B00839935Krishnamurthy-env.eba-wpbmmpu.us-east-1.elasticbeanstalk.com

Fig 15: Created environment application in the EBS



**Fig 16: Successful application testing in the browser displaying Homepage**



**Fig 17: Adding data in the add data page**

Not secure | a5team03b00839935krishnamurthy-env.eba-kyzjwmyz.us-east-1.elasticbeanstalk.com/addData935?

## Add Data

j1935 1935 55 Submit

**Fig 18: Filling the fields and clicking submit button**

Not secure | a5team03b00839935krishnamurthy-env.eba-kyzjwmyz.us-east-1.elasticbeanstalk.com/displayData935

## Display Data Page

jobName	partID	qty	options
j1935	1935	55	<a href="#">Edit</a> <a href="#">Delete</a>

[Home](#)

**Fig 19: Display data page after submitting the add data**

The screenshot shows a web browser window with the address bar displaying a URL from an AWS Elastic Beanstalk environment. The page title is "Edit Data". It contains three text input fields: "Job Name" with the value "j1935", "Part ID" with the value "1935", and "qty" with the value "55". Below these fields are two buttons: a blue "Submit" button and a grey "Home" button.

Not secure | a5team03b00839935krishnamurthy-env.eba-kyzjwmyz.us-east-1.elasticbeanstalk.com/editData935/j1935

Apps info.kalvisolai.com... Bookmarks Internet Young World Club - Kinetic Education [...] IoT based Heart Att... Java Overview Aptit... Search an element i... Other bookmarks

### Edit Data

Job Name

Part ID

qty

[Submit](#)

[Home](#)

**Fig 20: Edit Data page after clicking edit button in the display data page**

This screenshot is identical to the previous one, but the "qty" input field now contains the value "100". The "Job Name" and "Part ID" fields remain unchanged.

Not secure | a5team03b00839935krishnamurthy-env.eba-kyzjwmyz.us-east-1.elasticbeanstalk.com/editData935/j1935

Apps info.kalvisolai.com... Bookmarks Internet Young World Club - Kinetic Education [...] IoT based Heart Att... Java Overview Aptit... Search an element i... Other bookmarks

### Edit Data

Job Name

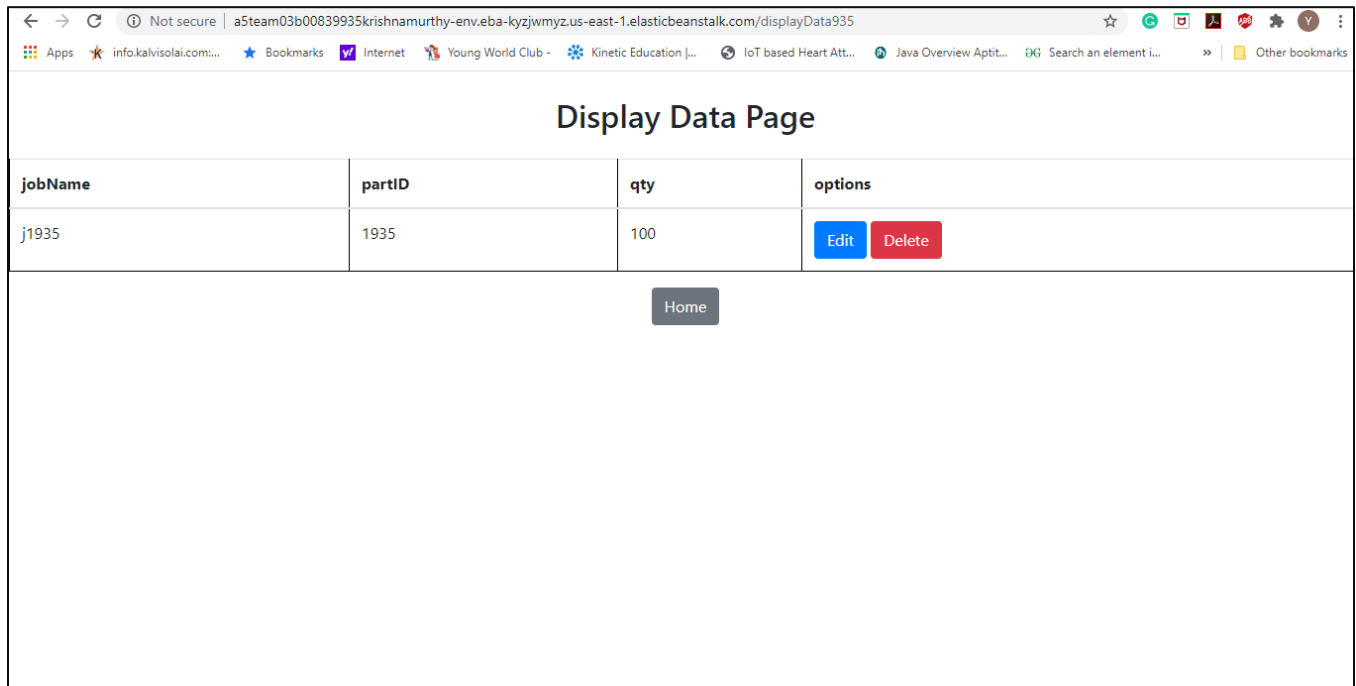
Part ID

qty

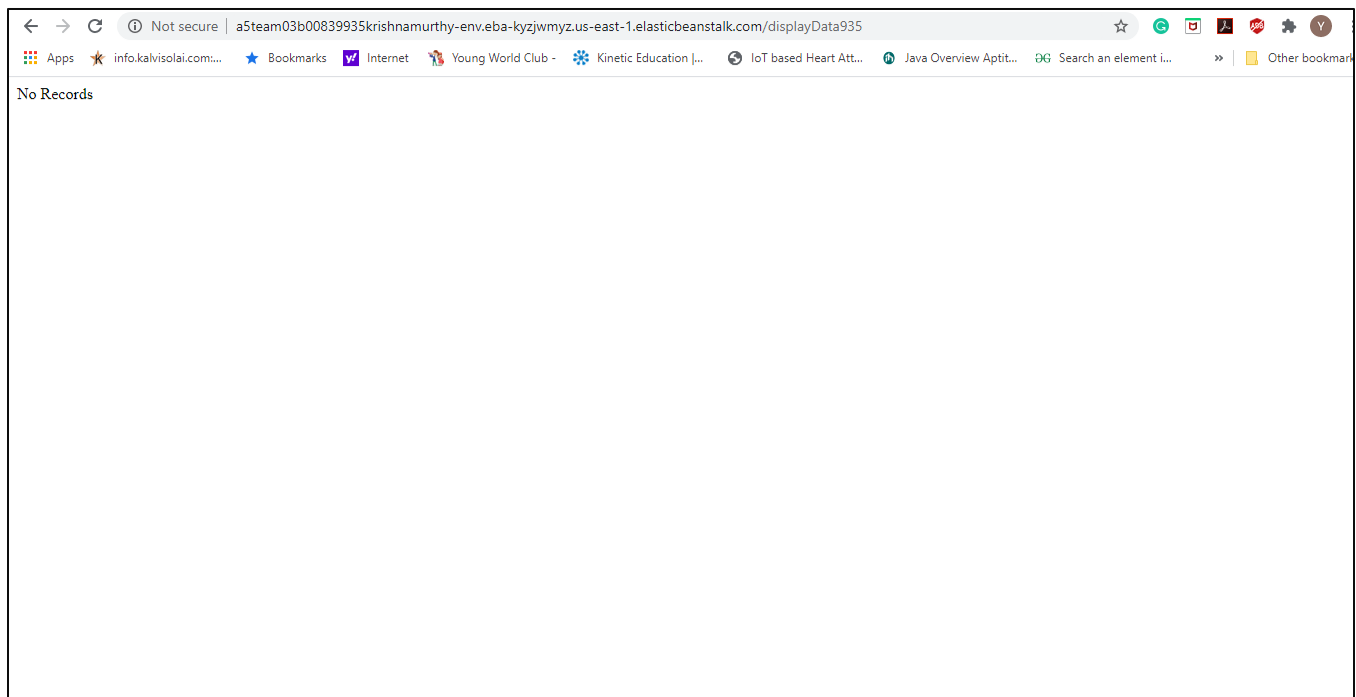
[Submit](#)

[Home](#)

**Fig 21: Editing the qty field and clicking the submit button**



**Fig 22: Submitting the edited data and displaying the successfully edited data**



**Fig 23: When the data is deleted by clicking the delete button no record is left and hence no records message is shown**

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