**Shell – Final Case Study Assessment**

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Employee ID: 654865  
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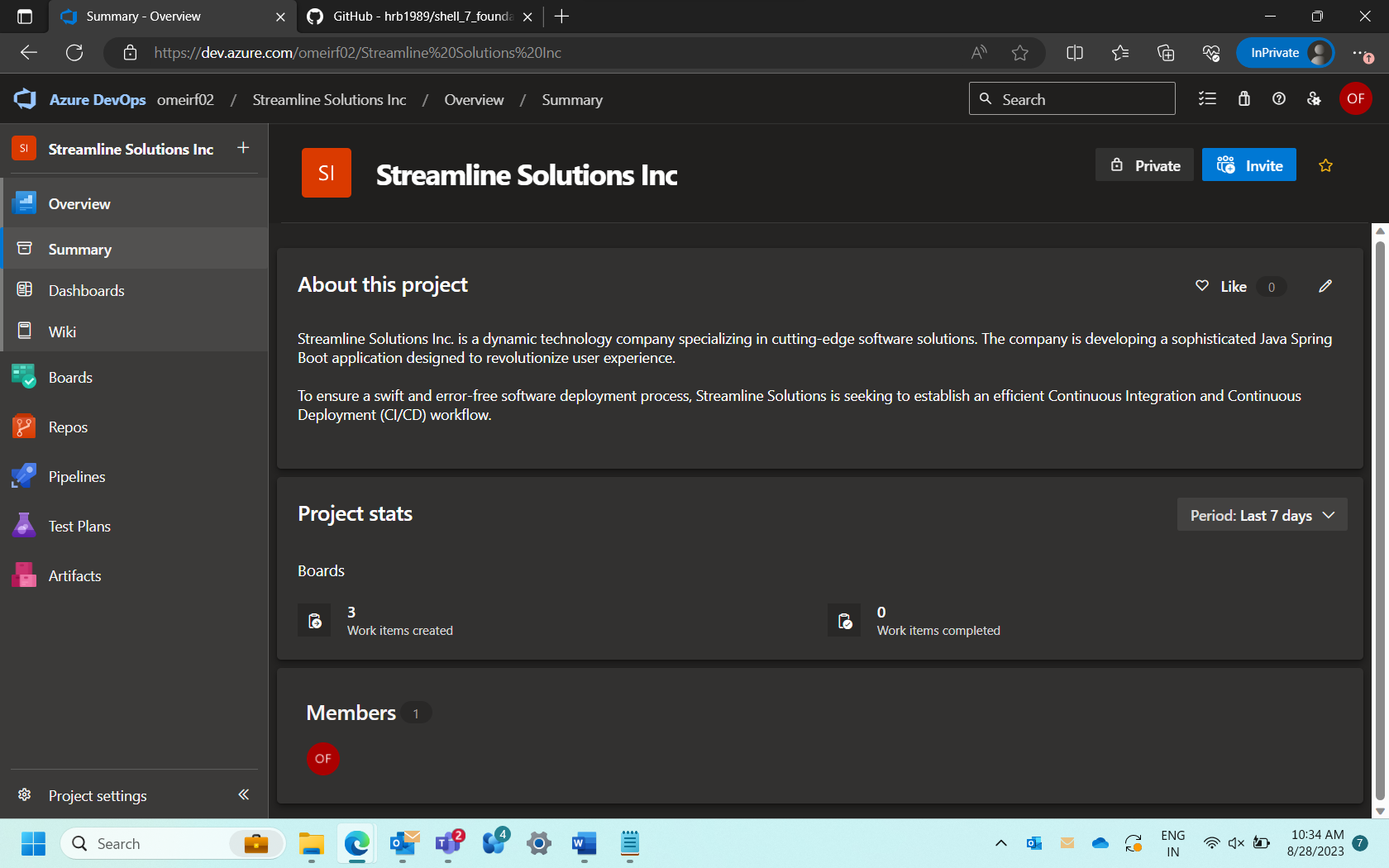
**Scenario**Streamline Solutions Inc. - Optimizing Software Deployment

**Problem Statement**  
Implementing a Seamless CI/CD Workflow for a Spring Boot Application using Azure Boards, Azure, Git, Maven, Docker, GitHub, GitHub Actions

**Background**Streamline Solutions Inc. is a dynamic technology company specializing in cutting-edge software solutions. The company is developing a sophisticated Java Spring Boot application designed to revolutionize user experience. To ensure a swift and error-free software deployment process, Streamline Solutions is seeking to establish an efficient Continuous Integration and Continuous Deployment (CI/CD) workflow.

**Activities**

1. Create Project



1. Create Epic

User Management

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Appointment ManagementA screenshot of a computer

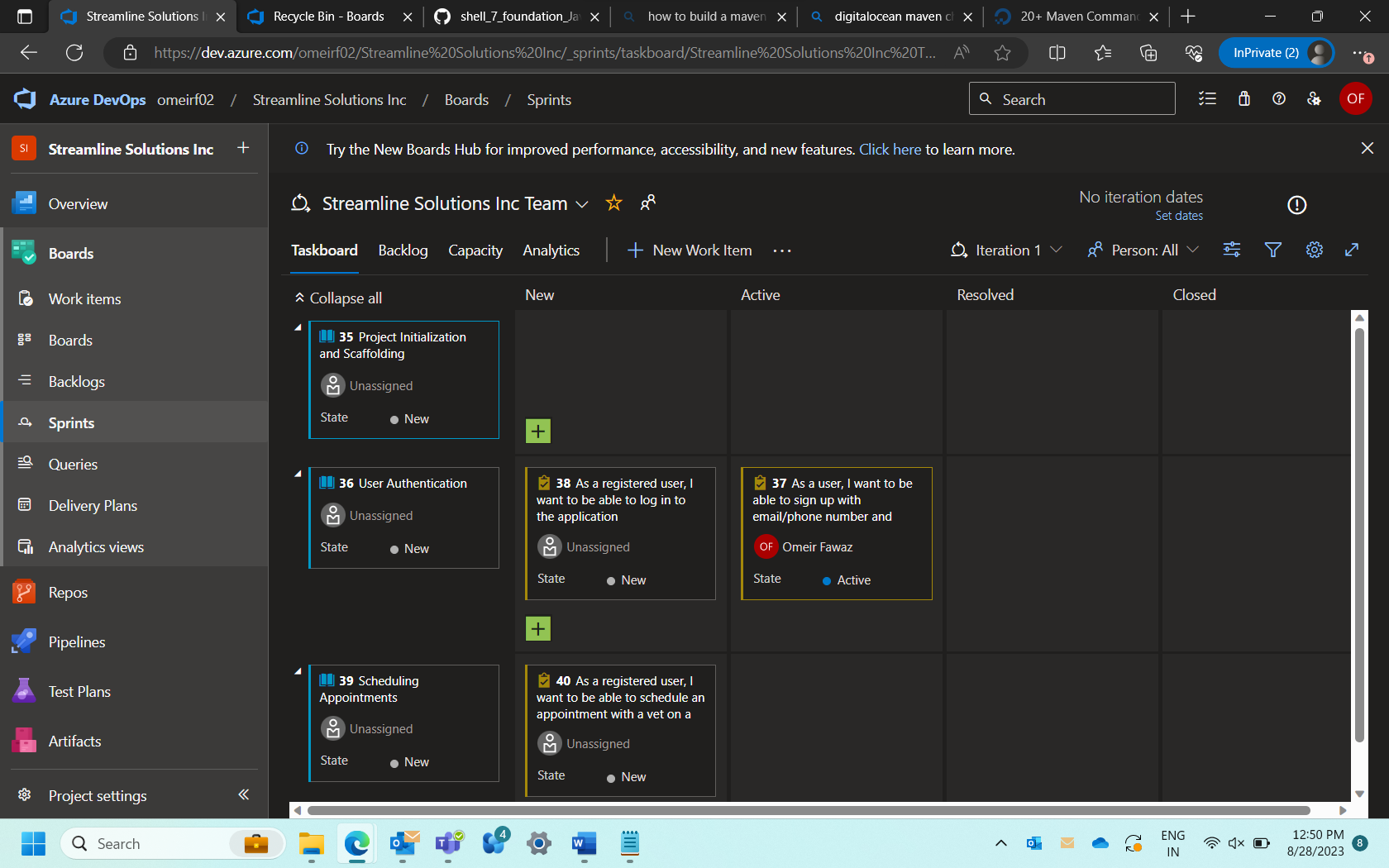
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1. Create Product Backlog

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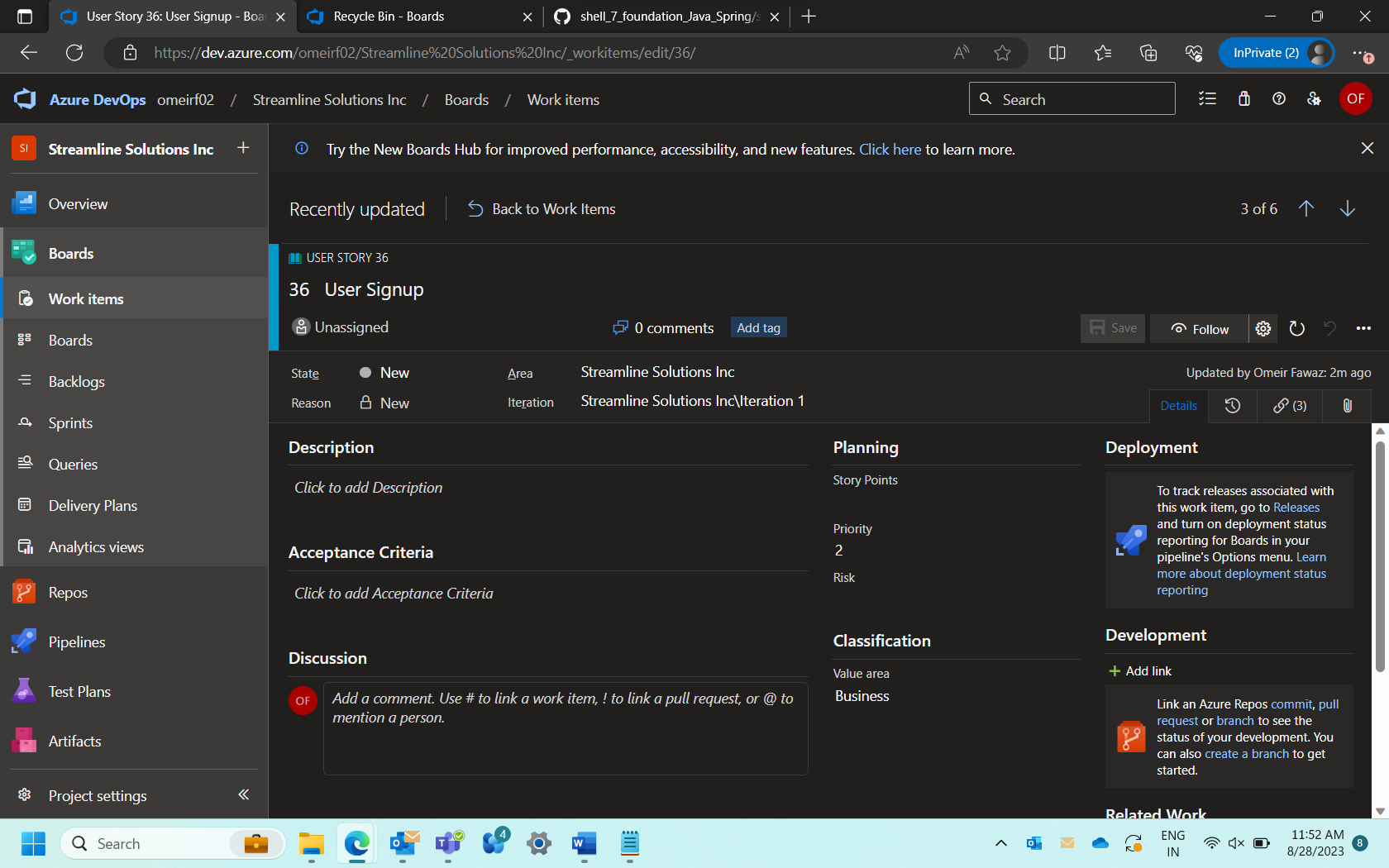
1. Create Sprint Backlog



1. Create User Stories

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1. Create Tasks

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1. Create Test Cases

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1. Create Defects

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Creating VM

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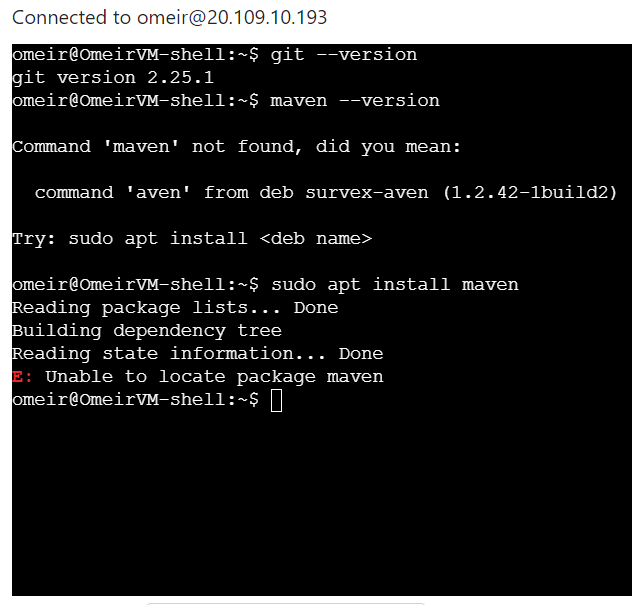
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Connecting to VM via SSHA screenshot of a computer

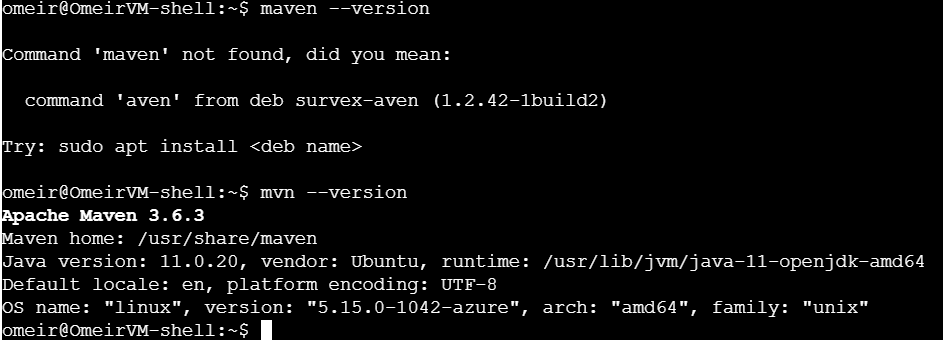
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Install Docker

sudo apt update

sudo apt install apt-transport-https ca-certificates curl software-properties-common

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add –

sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu focal stable"

apt-cache policy docker-ce

sudo apt install docker-ce

sudo systemctl status docker

docker

docker run hello-world

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A screenshot of a computer screen

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A black screen with white text

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A screenshot of a computer screen

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A screenshot of a computer

Description automatically generated

A screenshot of a computer program

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Clone Repository

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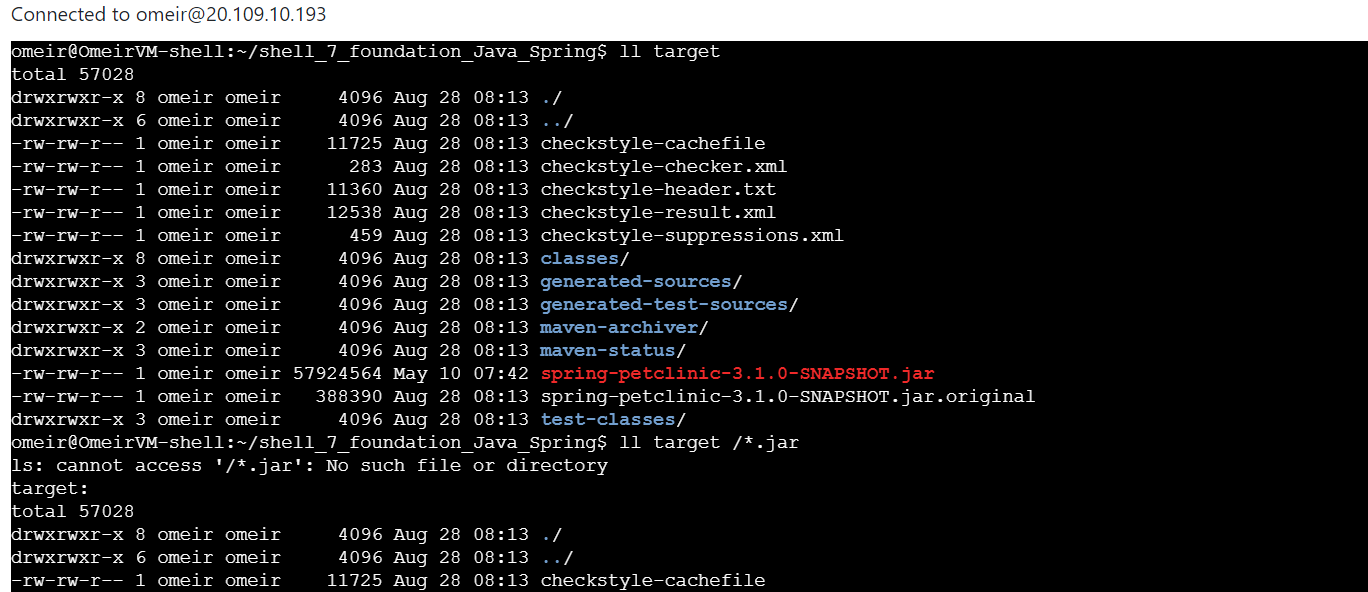
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Installing Maven and Building App

mvn install -DskipTests

Running App

java -jar target/spring-petclinic-3.1.0-SNAPSHOT.jar



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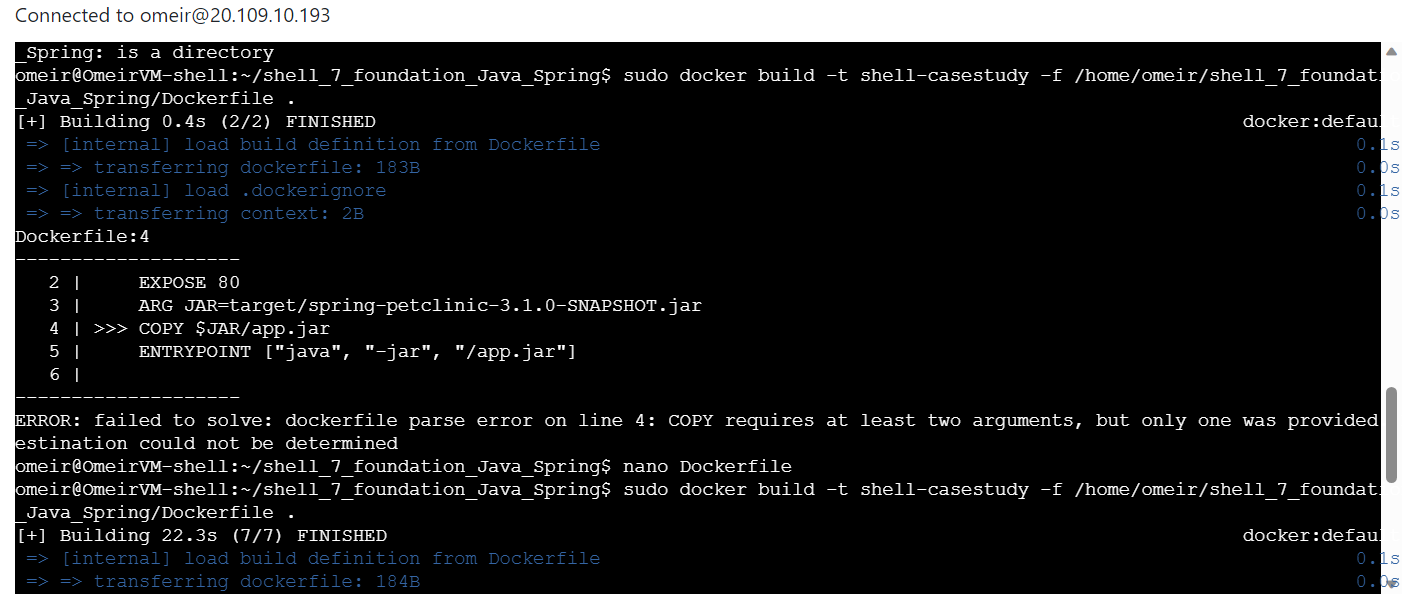
Add Feature (my name)

A screenshot of a computer

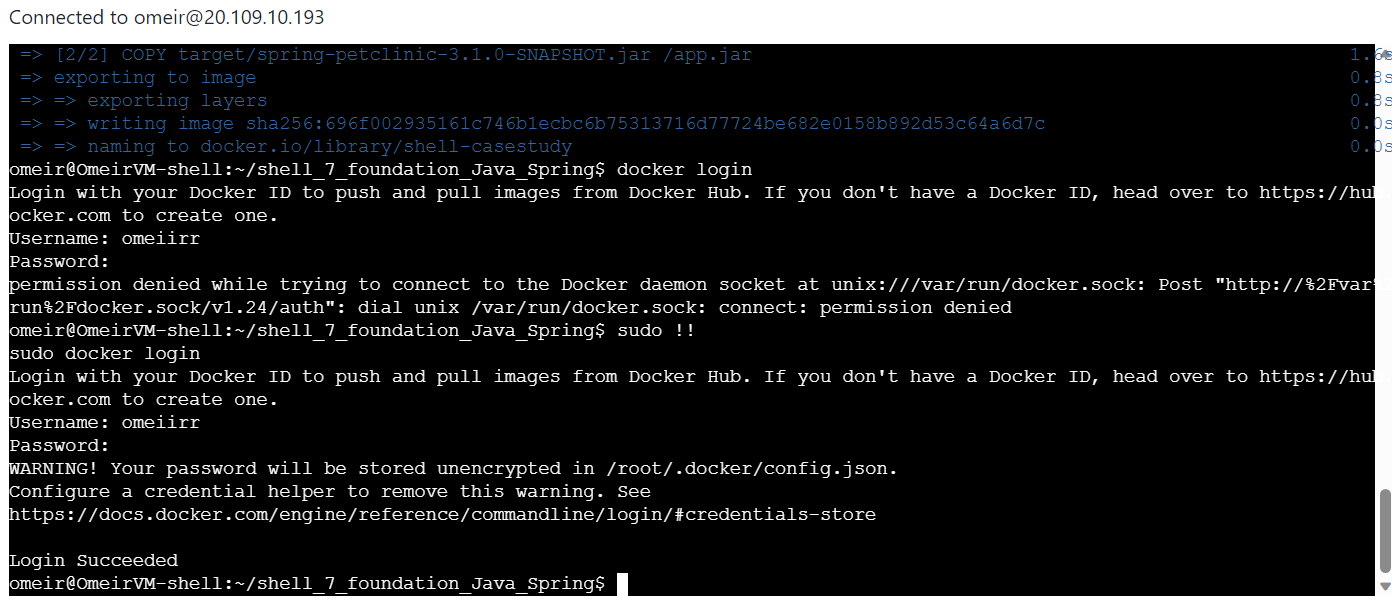
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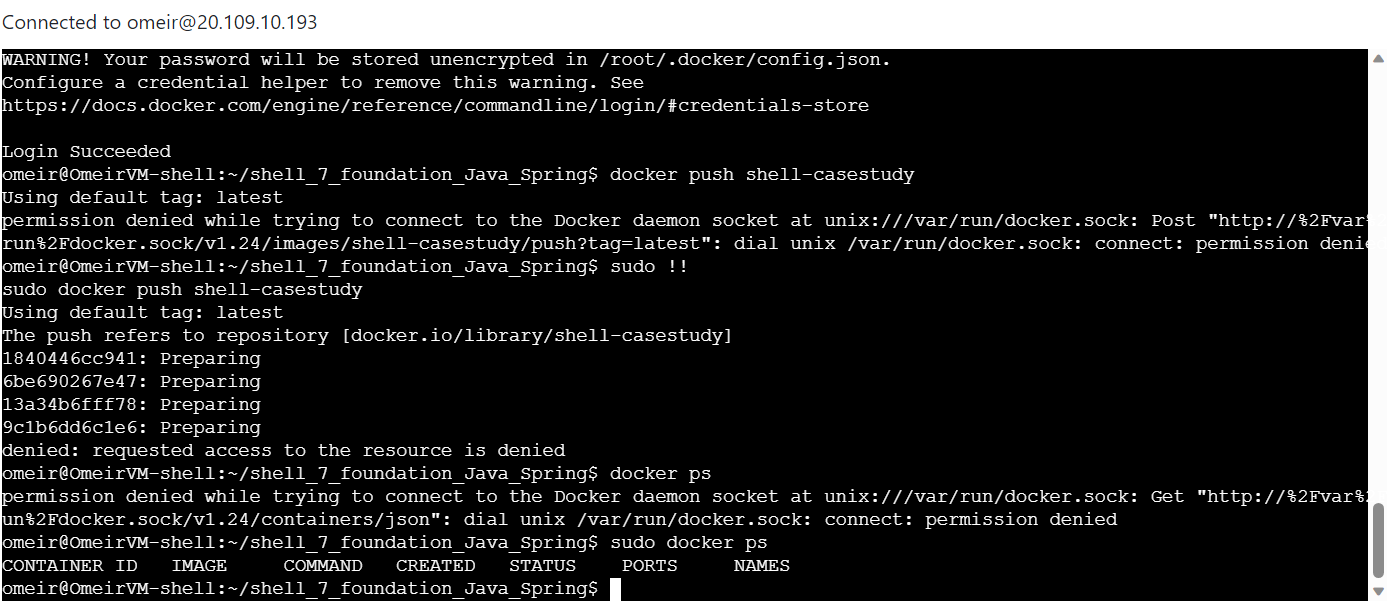
Build Docker container



Log in to Docker Hub



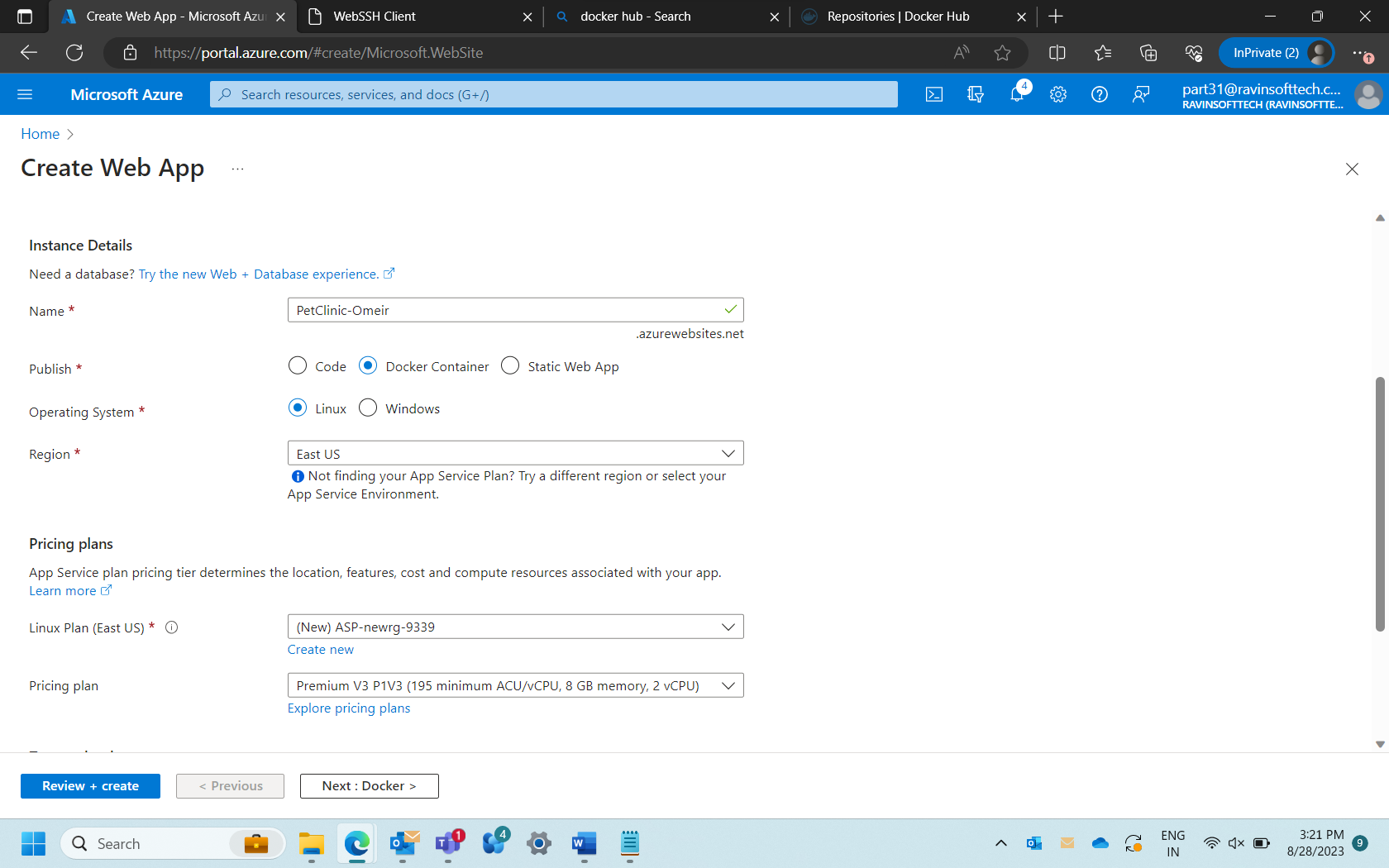
Push to Docker Hub



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Create Web App



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Deployed web app

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**GitHub Actions**

Failed CI/CD Workflow

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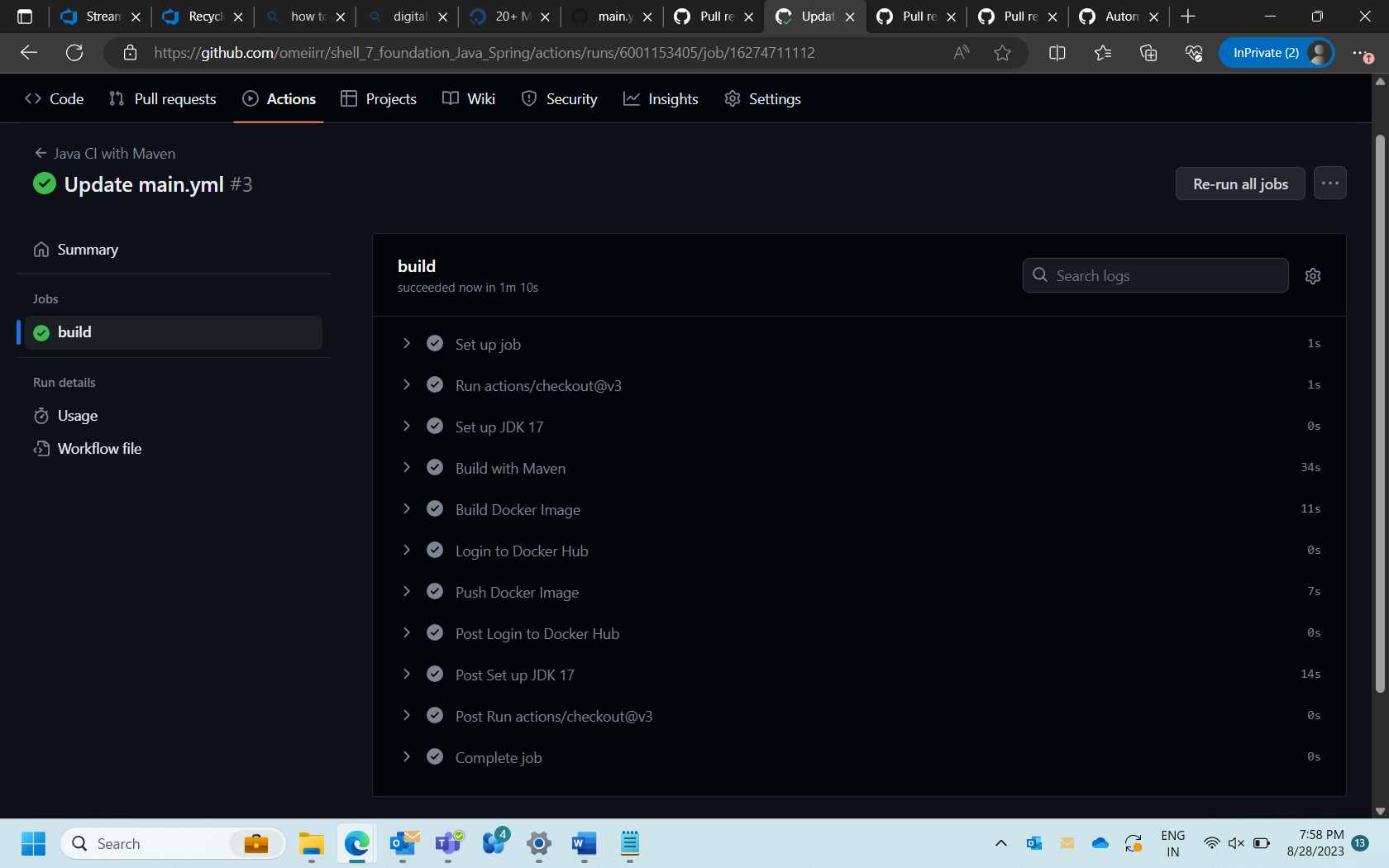
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Successful CI/CD Workflow

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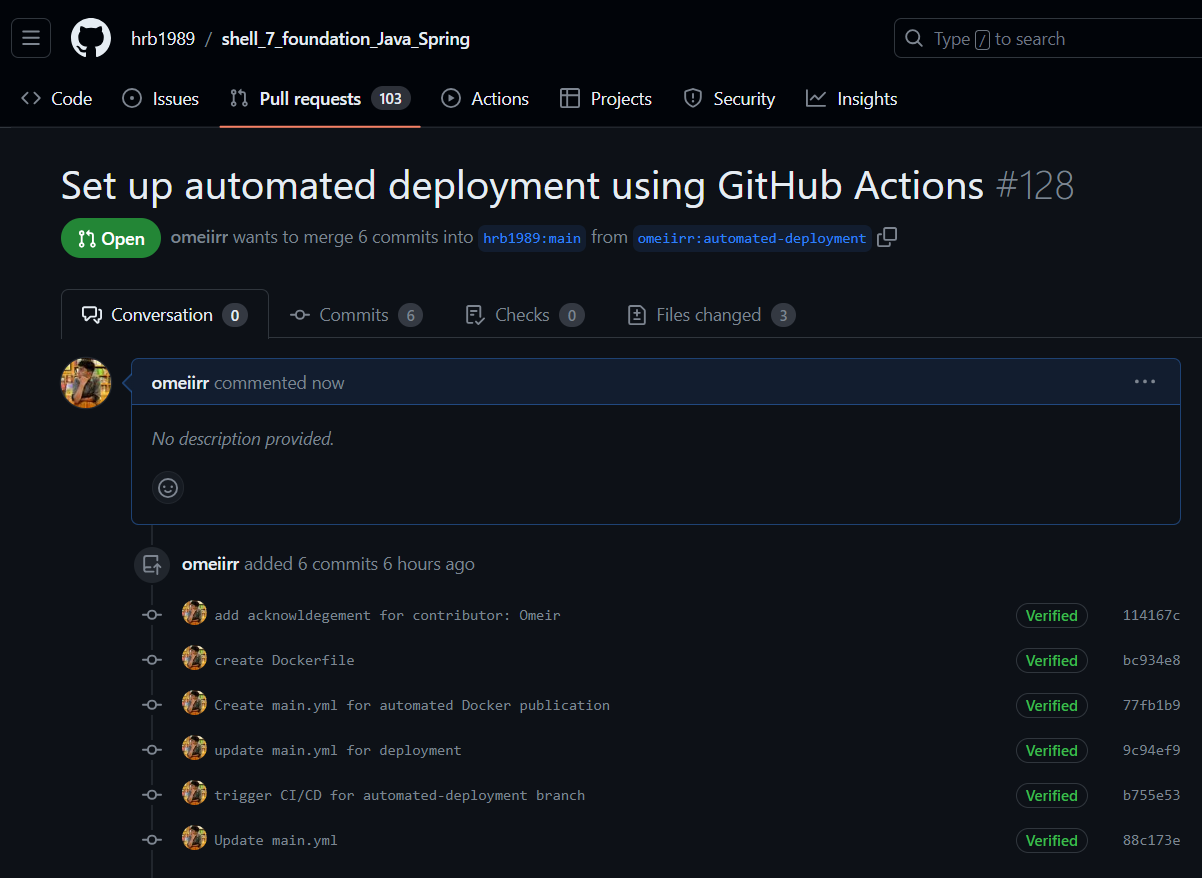
Raise PRs against the parent repository

PR 1:

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PR 2:



Regarding Task 11:  
New look and feel of app unable to be reflected in the deployed app as the VM and web app were shut down on admin level. However, functionality is complete.