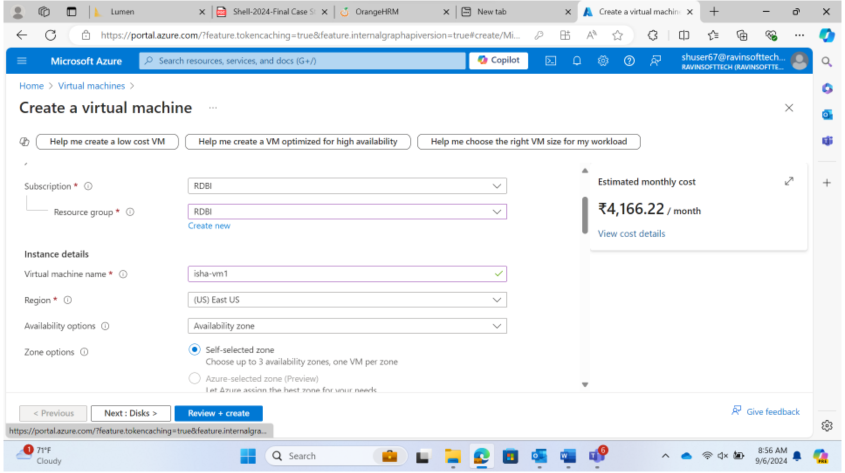
Case Study

Foundational Bootcamp – Shell onboarding

Name: Isha Singhal
Date: 6th September, 2024

This is the documentation for the case study performed on 6th September. Below given are the screenshots with the tasks performed by me.

1. **Creation of Virtual Machine:** We were asked to create a virtual machine using Microsoft Azure tool. Some screenshots that was took during the process is given below.


Lumen
Shell-2024-Final Case St
OrangeHRM
New tab
Create a virtual machin
https://portal.azure.com/?feature.tokencaching=true&feature.internalgraphapiversion=true#create/Mi...
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
shuser67@ravinsofttech...
RAVINSOFTTECH (RAVINSOFTTE...
Home > Virtual machines >
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
< Previous
Next : Disks >
Review + create
Give feedback
https://portal.azure.com/?feature.tokencaching=true&feature.internalgra...
71°F
Cloudy
Search
8:56 AM
9/6/2024

Create a virtual machine

Subscription * : RDBI

Resource group * : RDBI

Create new

Instance details

Virtual machine name * : isha-vm1

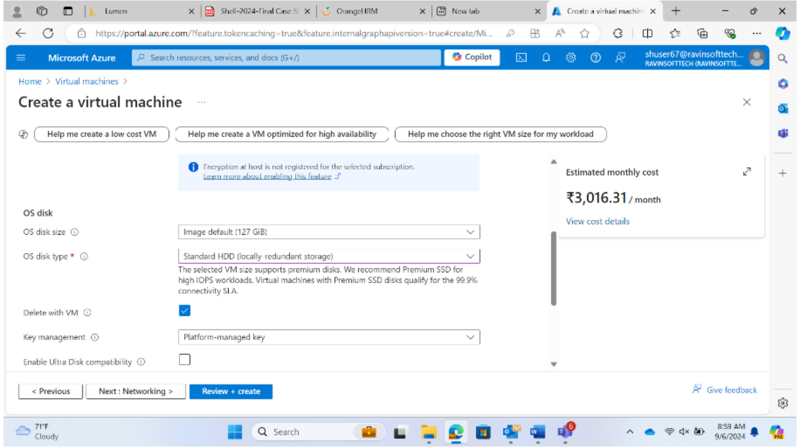
Region * : (US) East US

Availability options : Availability zone

Zone options : ● Self-selected zone
Choose up to 3 availability zones, one VM per zone
○ Azure-selected zone (Preview)
Let Azure assign the best zone for your needs

Estimated monthly cost
₹4,166.22 / month
View cost details

Creating a Virtual Machine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https://portal.azure.com/?feature.tokencaching=true&feature.internalgraphapiversion=true#create/Mi...
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Copilot
shuser67@ravinsofttech...
RAVINSOFTTECH (RAVINSOFTTE...
Home > Virtual machines >
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
< Previous
Next : Networking >
Review + create
Give feedback
71°F
Cloudy
Search
8:59 AM
9/6/2024

Create a virtual machine

Encryption at host is not registered for the selected subscription.
Learn more about enabling this feature

OS disk

OS disk size : Image default (127 GiB)

OS disk type * : Standard HDD (locally redundant storage)
The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

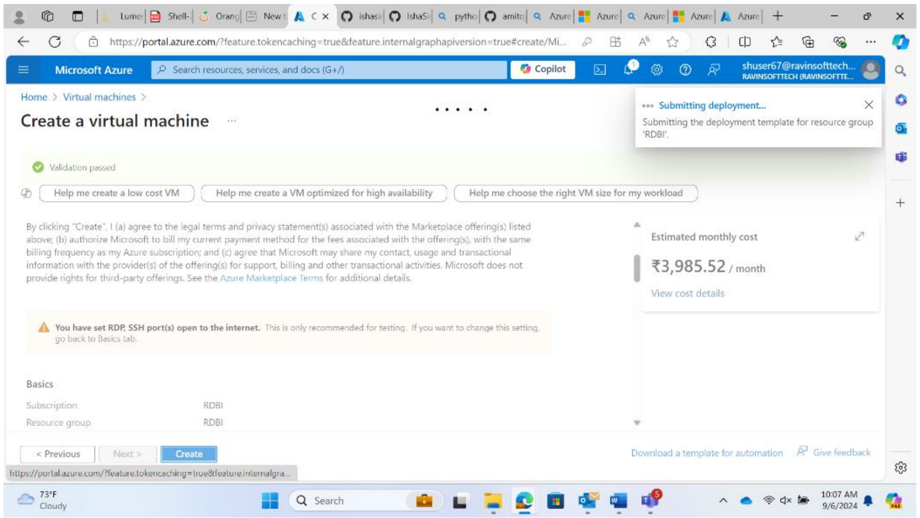
Delete with VM : ☑

Key management : Platform-managed key

Enable Ultra Disk compatibility : □

Estimated monthly cost
₹3,016.31 / month
View cost details

Creating a Virtual Machine



https://portal.azure.com/?feature.tokencaching=true&feature.internalgraphapiversion=true#create/Mi...
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
shuser67@ravinsofttech...
RAVINSOFTTECH (RAVINSOFTTE...
Home > Virtual machines >

Create a virtual machine

Submitting deployment...
Submitting the deployment template for resource group 'RDBI'.

Validation passed

Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

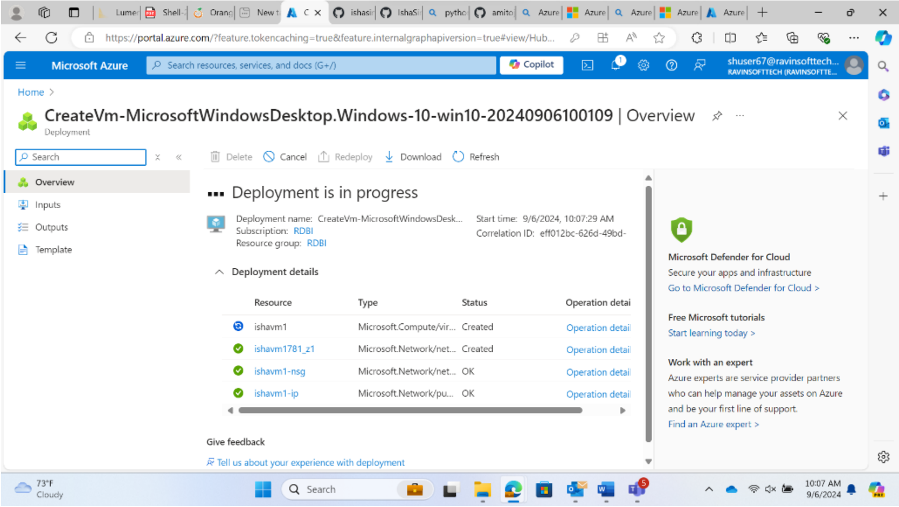
You have set RDP, SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Estimated monthly cost
₹3,985.52 / month
View cost details

Basics

Subscription	RDBI
Resource group	RDBI

Virtual machine validation successful



https://portal.azure.com/?feature.tokencaching=true&feature.internalgraphapiversion=true#view/Hub...
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
shuser67@ravinsofttech...
RAVINSOFTTECH (RAVINSOFTTE...
Home >

CreateVm-MicrosoftWindowsDesktop.Windows-10-win10-20240906100109 | Overview
Deployment

Search
Delete
Cancel
Redeploy
Download
Refresh
Overview
Inputs
Outputs
Template

Deployment is in progress

Deployment name: CreateVm-MicrosoftWindowsDesk...
Subscription: RDBI
Resource group: RDBI
Start time: 9/6/2024, 10:07:29 AM
Correlation ID: eff012bc-626d-49bd-

Deployment details

Resource	Type	Status	Operation detai
ishavm1	Microsoft.Compute/vir...	Created	Operation detai
ishavm1781_z1	Microsoft.Network/net...	Created	Operation detai
ishavm1-nsg	Microsoft.Network/net...	OK	Operation detai
ishavm1-ip	Microsoft.Network/pu...	OK	Operation detai

Give feedback
Tell us about your experience with deployment

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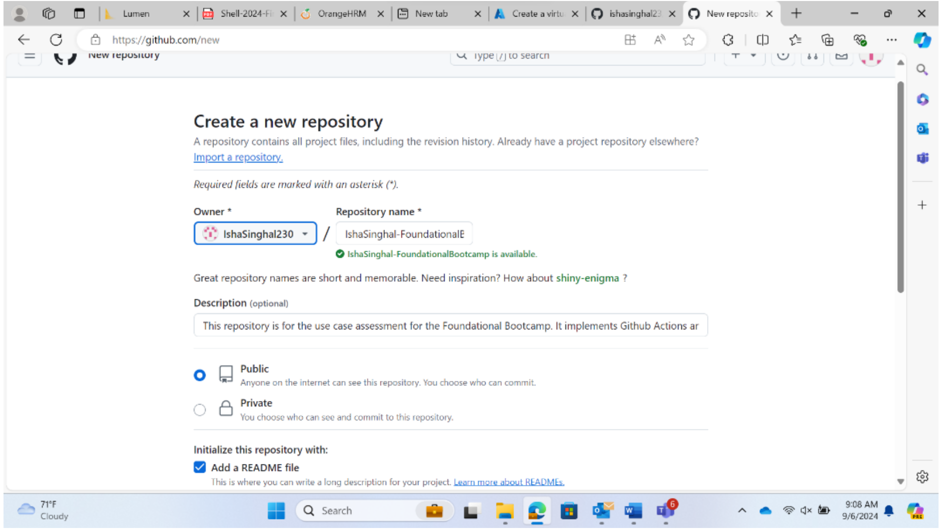
Virtual Machine Created

2. **Working on Github Workflows:** We started by creating a GitHub repository and writing a simple calculator program. Next, we developed some unit test cases and a YAML file. Using GitHub Actions, we built and tested the project to ensure everything was working perfectly.



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Required fields are marked with an asterisk (*).

Owner * IshaSinghal230 / Repository name * IshaSinghal-FoundationalE

IshaSinghal-FoundationalBootcamp is available.

Great repository names are short and memorable. Need inspiration? How about shiny-enigma ?

Description (optional)

This repository is for the use case assessment for the Foundational Bootcamp. It implements Github Actions ar

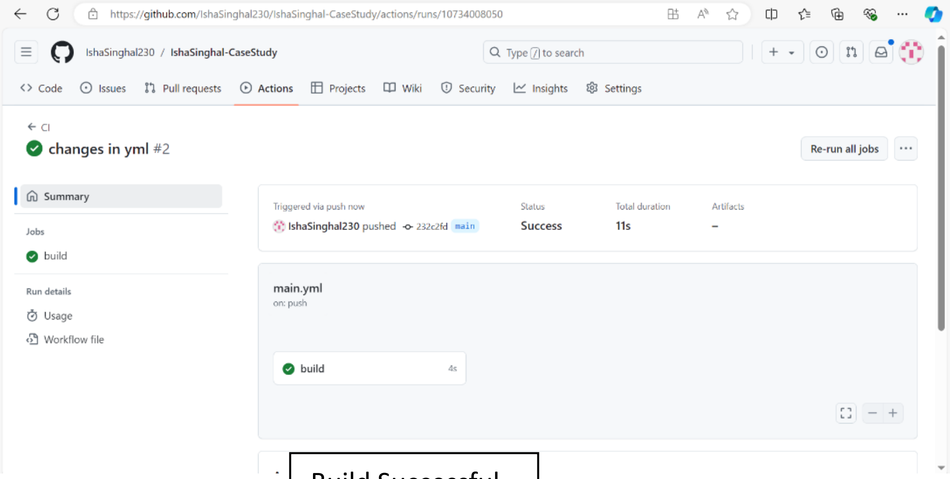
● Public
Anyone on the internet can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

Initialize this repository with:

☑ Add a README file
This is where you can write a long description for your project. Learn more about READMEs.

Creating a Github Repository



✓ changes in yml #2

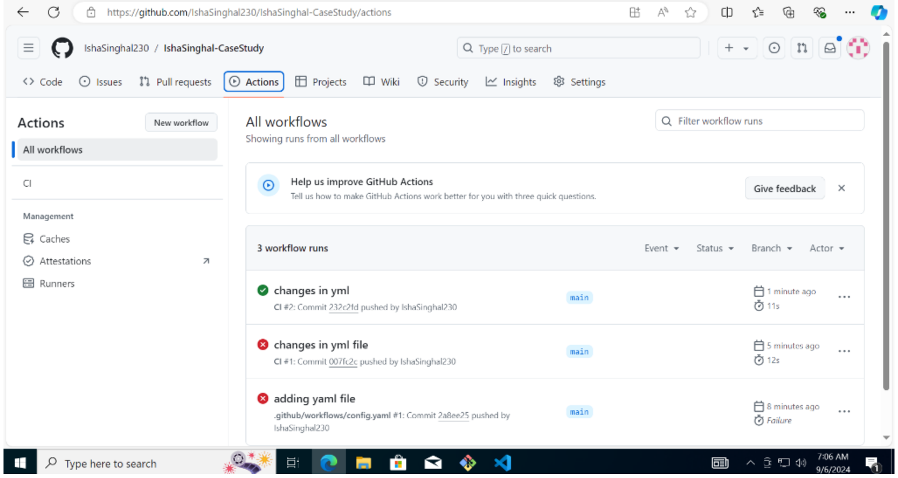
build

Triggered via push now	Status	Total duration	Artifacts
IshaSinghal230 pushed 232c2fd main	Success	11s	–

main.yml
on: push

✓ build 4s

Build Successful



All workflows
Showing runs from all workflows

Help us improve GitHub Actions
Tell us how to make GitHub Actions work better for you with three quick questions.

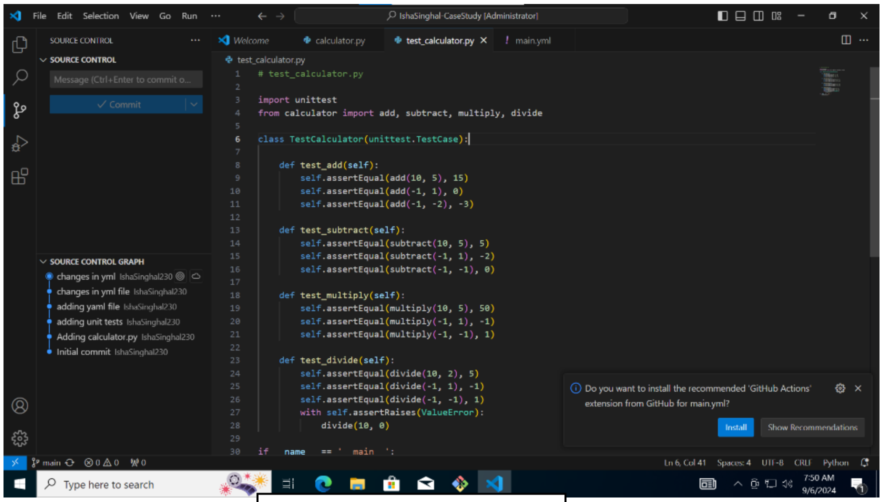
3 workflow runs

✓ changes in yml
CI #2: Commit 232c2fd pushed by IshaSinghal230 — main — 1 minute ago — 11s

✗ changes in yml file
CI #1: Commit 007fc2c pushed by IshaSinghal230 — main — 5 minutes ago — 12s

✗ adding yaml file
.github/workflows/config.yaml #1: Commit 2a8ee25 pushed by IshaSinghal230 — main — 8 minutes ago — Failure

Github Actions ScreenShot



SOURCE CONTROL GRAPH

- changes in yml IshaSinghal230
- changes in yml file IshaSinghal230
- adding yaml file IshaSinghal230
- adding unit tests IshaSinghal230
- Adding calculator.py IshaSinghal230
- Initial commit IshaSinghal230

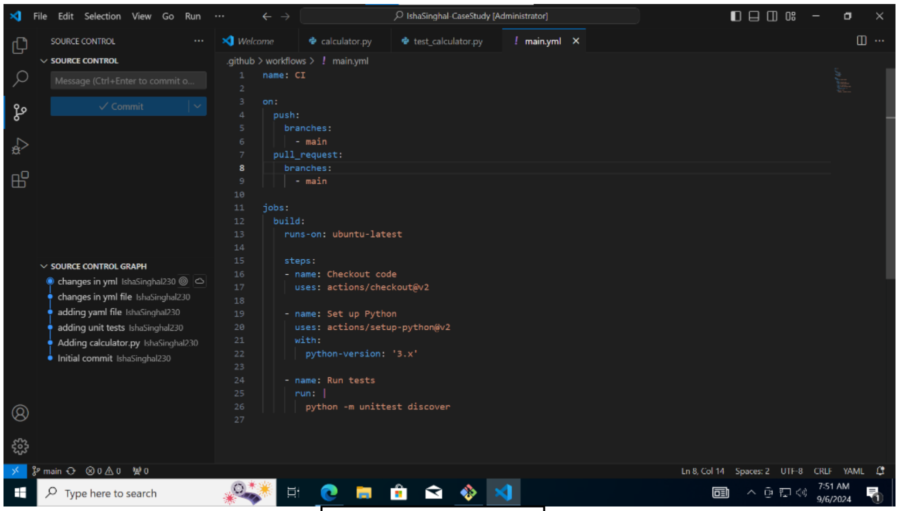
test_calculator.py

```python
# test_calculator.py

import unittest
from calculator import add, subtract, multiply, divide

class TestCalculator(unittest.TestCase):

    def test_add(self):
        self.assertEqual(add(10, 5), 15)
        self.assertEqual(add(-1, 1), 0)
        self.assertEqual(add(-1, -2), -3)

    def test_subtract(self):
        self.assertEqual(subtract(10, 5), 5)
        self.assertEqual(subtract(-1, 1), -2)
        self.assertEqual(subtract(-1, -1), 0)

    def test_multiply(self):
        self.assertEqual(multiply(10, 5), 50)
        self.assertEqual(multiply(-1, 1), -1)
        self.assertEqual(multiply(-1, -1), 1)

    def test_divide(self):
        self.assertEqual(divide(10, 2), 5)
        self.assertEqual(divide(-1, 1), -1)
        self.assertEqual(divide(-1, -1), 1)
        with self.assertRaises(ValueError):
            divide(10, 0)

if __name__ == '__main__':
```

Do you want to install the recommended 'GitHub Actions' extension from GitHub for main.yml?

Install Show Recommendations

Unit Test Python Code



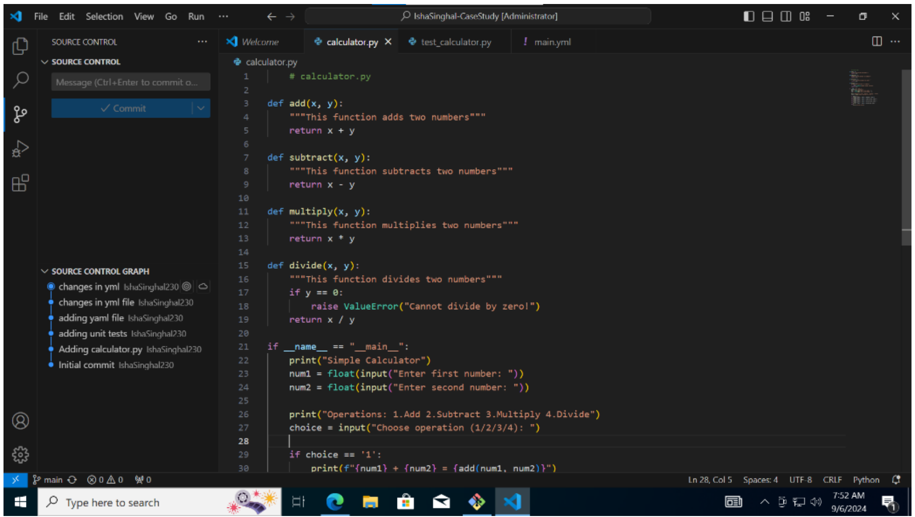
SOURCE CONTROL GRAPH

- changes in yml IshaSinghal230
- changes in yml file IshaSinghal230
- adding yaml file IshaSinghal230
- adding unit tests IshaSinghal230
- Adding calculator.py IshaSinghal230
- Initial commit IshaSinghal230

.github > workflows > main.yml

```yaml
name: CI

on:
  push:
    branches:
      - main
  pull_request:
    branches:
      - main

jobs:
  build:
    runs-on: ubuntu-latest

    steps:
    - name: Checkout code
      uses: actions/checkout@v2

    - name: Set up Python
      uses: actions/setup-python@v2
      with:
        python-version: '3.x'

    - name: Run tests
      run: |
        python -m unittest discover
```

Main.yml Code



SOURCE CONTROL GRAPH

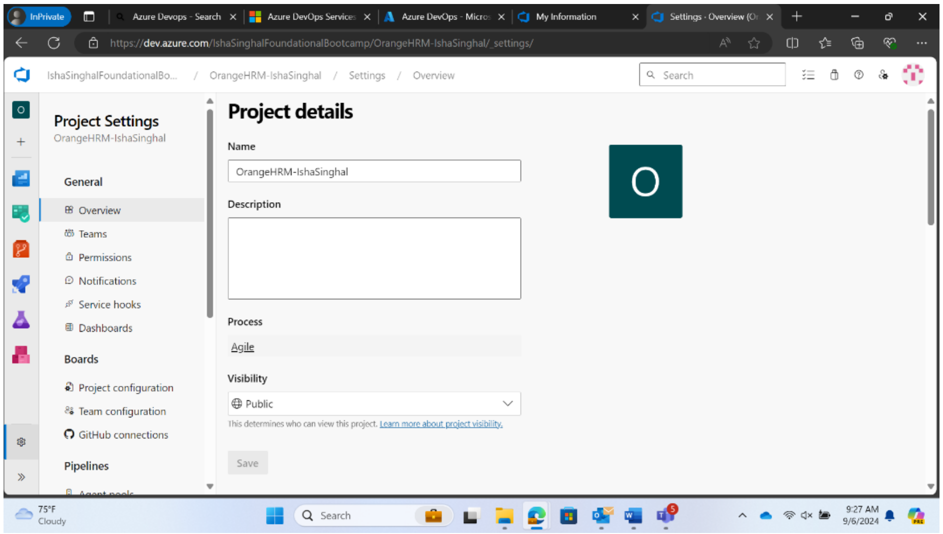
- changes in yml IshaSinghal230
- changes in yml file IshaSinghal230
- adding yaml file IshaSinghal230
- adding unit tests IshaSinghal230
- Adding calculator.py IshaSinghal230
- Initial commit IshaSinghal230

calculator.py

```python
    # calculator.py

def add(x, y):
    """This function adds two numbers"""
    return x + y

def subtract(x, y):
    """This function subtracts two numbers"""
    return x - y

def multiply(x, y):
    """This function multiplies two numbers"""
    return x * y

def divide(x, y):
    """This function divides two numbers"""
    if y == 0:
        raise ValueError("Cannot divide by zero!")
    return x / y

if __name__ == "__main__":
    print("Simple Calculator")
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))

    print("Operations: 1.Add 2.Subtract 3.Multiply 4.Divide")
    choice = input("Choose operation (1/2/3/4): ")

    if choice == '1':
        print(f"{num1} + {num2} = {add(num1, num2)}")
```

Main Python Code

3. **Working in Azure Devops:** We were assigned the task of working with the Orange HRM website. Our objective included:
   a. Writing five user stories.
   b. Creating tasks for each of these user stories.
   c. Developing test cases to evaluate the application.
   d. Logging at least three bugs identified through these test cases.



Project details

Name: OrangeHRM-IshaSinghal

Description:

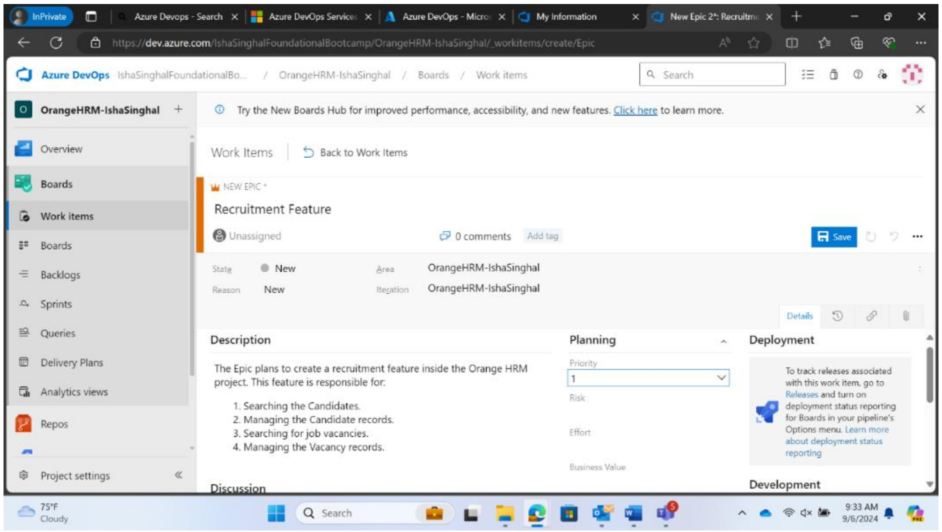
Process: Agile

Visibility: Public

This determines who can view this project. Learn more about project visibility.

Save

Creating Azure Project



https://dev.azure.com/IshaSinghalFoundationalBootcamp/OrangeHRM-IshaSinghal/_workitems/create/Epic
Azure DevOps IshaSinghalFoundationalBo... / OrangeHRM-IshaSinghal / Boards / Work items
OrangeHRM-IshaSinghal
Overview
Boards
Work items
Boards
Backlogs
Sprints
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Delivery Plans
Analytics views
Repos
Project settings
Work Items
Back to Work Items
Save
Details

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NEW EPIC *

Recruitment Feature

Unassigned

0 comments Add tag

State: New
Reason: New
Area: OrangeHRM-IshaSinghal
Iteration: OrangeHRM-IshaSinghal

Description

The Epic plans to create a recruitment feature inside the Orange HRM project. This feature is responsible for:

1. Searching the Candidates.
2. Managing the Candidate records.
3. Searching for job vacancies.
4. Managing the Vacancy records.

Discussion

Planning

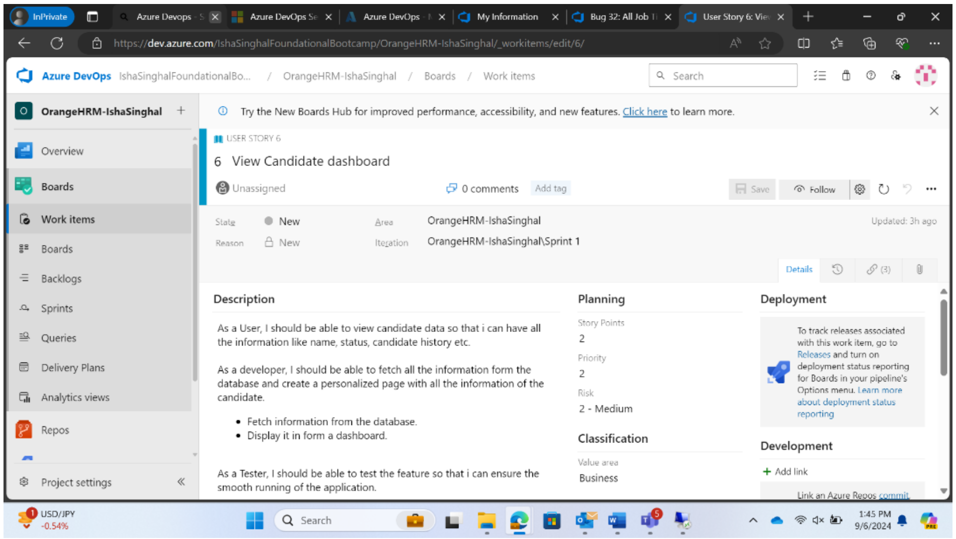
Priority: 1
Risk
Effort
Business Value

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Creating an Epic



https://dev.azure.com/IshaSinghalFoundationalBootcamp/OrangeHRM-IshaSinghal/_workitems/edit/6/

USER STORY 6

6 View Candidate dashboard

Unassigned

0 comments

State: New

Reason: New

Area: OrangeHRM-IshaSinghal

Iteration: OrangeHRM-IshaSinghal\Sprint 1

Updated: 3h ago

Description

As a User, I should be able to view candidate data so that i can have all the information like name, status, candidate history etc.

As a developer, I should be able to fetch all the information form the database and create a personalized page with all the information of the candidate.

- Fetch information from the database.
- Display it in form a dashboard.

As a Tester, I should be able to test the feature so that i can ensure the smooth running of the application.

Planning

Story Points: 2

Priority: 2

Risk: 2 - Medium

Classification

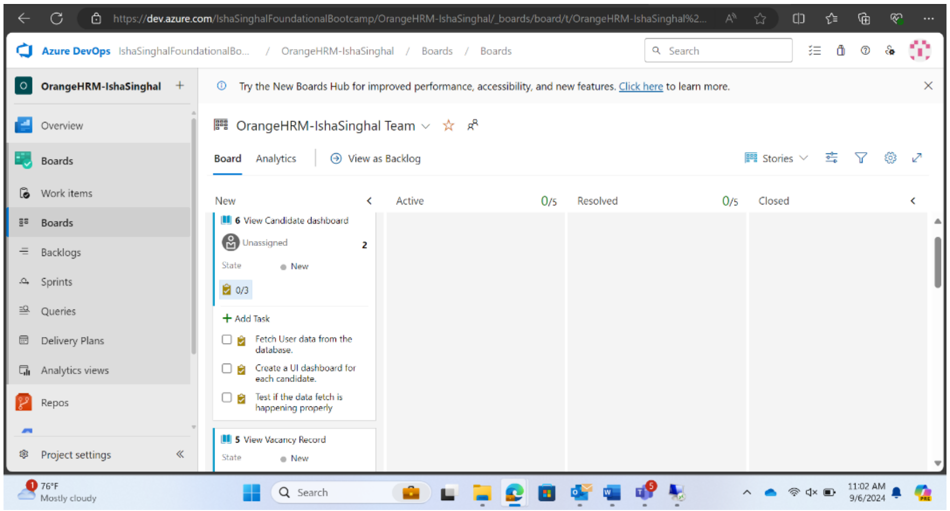
Value area: Business

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Creating a User Story

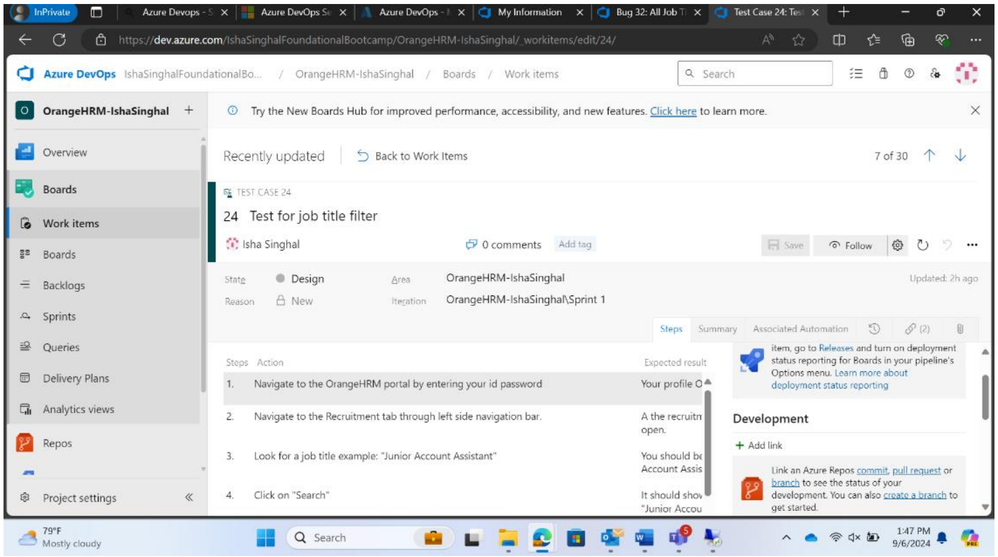


https://dev.azure.com/IshaSinghalFoundationalBootcamp/OrangeHRM-IshaSinghal/_boards/board/t/OrangeHRM-IshaSinghal%2...

OrangeHRM-IshaSinghal Team

New	Active 0/5	Resolved 0/5	Closed
6 View Candidate dashboard Unassigned 2 State: New 0/3 + Add Task □ Fetch User data from the database. □ Create a UI dashboard for each candidate. □ Test if the data fetch is happening properly			
5 View Vacancy Record State: New			

Creating Tasks



https://dev.azure.com/IshaSinghalFoundationalBootcamp/OrangeHRM-IshaSinghal/_workitems/edit/24/

Try the New Boards Hub for improved performance, accessibility, and new features. Click here to learn more.

TEST CASE 24

24 Test for job title filter

Isha Singhal 0 comments

State: Design
Reason: New
Area: OrangeHRM-IshaSinghal
Iteration: OrangeHRM-IshaSinghal\Sprint 1
Updated: 2h ago

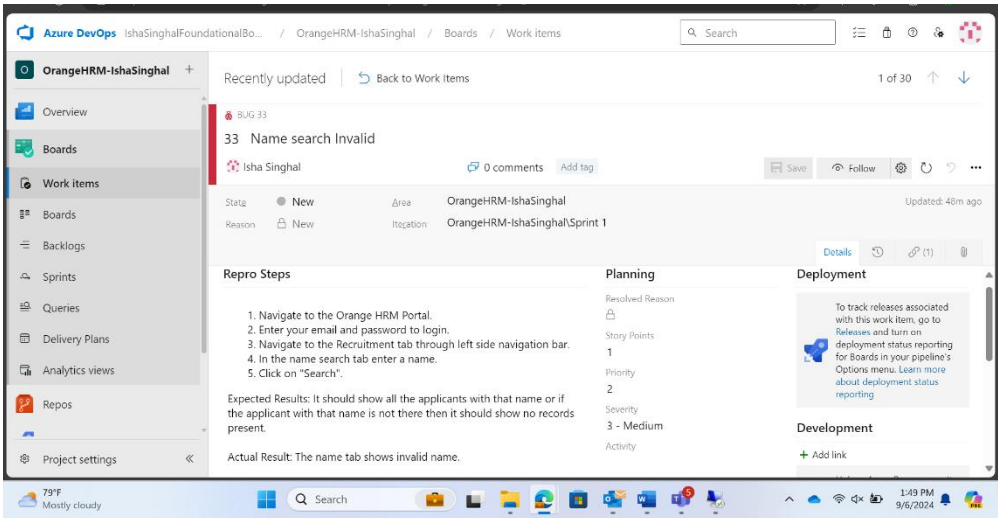
Steps	Action	Expected result
1.	Navigate to the OrangeHRM portal by entering your id password	Your profile O
2.	Navigate to the Recruitment tab through left side navigation bar.	A the recruitn open.
3.	Look for a job title example: "Junior Account Assistant"	You should be Account Assis
4.	Click on "Search"	It should show "Junior Accou

item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Creating Test Cases for the user



BUG 33

33 Name search Invalid

Isha Singhal 0 comments

State: New
Reason: New
Area: OrangeHRM-IshaSinghal
Iteration: OrangeHRM-IshaSinghal\Sprint 1
Updated: 48m ago

Repro Steps

1. Navigate to the Orange HRM Portal.
2. Enter your email and password to login.
3. Navigate to the Recruitment tab through left side navigation bar.
4. In the name search tab enter a name.
5. Click on "Search".

Expected Results: It should show all the applicants with that name or if the applicant with that name is not there then it should show no records present.

Actual Result: The name tab shows invalid name.

Planning

Resolved Reason:
Story Points: 1
Priority: 2
Severity: 3 - Medium
Activity:

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Logging The Bugs

Important Links

Github Link: [IshaSinghal230/IshaSinghal-CaseStudy (github.com)]

Azure DevOps Link: [Summary - Overview (azure.com)]

THANK YOU