# Devops – Final Assessment

## Section 1: Multiple-Choice Questions (MCQs)

1) What does WSL stand for in the context of Windows?

a. Windows Software Locator

b. Windows System Locator

c. Windows Subsystem for Linux

d. Windows Shell Language

Answer : (c) Windows Subsystem for Linux

2) What is the primary goal of continuous integration (CI) in DevOps?

a. Automating manual testing

b. Frequent integration of code changes

c. Managing cloud infrastructure

d. Monitoring server performance

Answer : (b) Frequent integration of code changes

3) In the Linux command line, what does the cd command do?

a. Copy files and directories

b. Change the working directory

c. Create a new directory

d. Calculate directory size

Answer : (b) Change the working directory

4) Which of the following is not a Linux distribution?

a. Ubuntu

b. CentOS

c. Docker

d. Debian

Answer : (c) Docker

5) What is Docker primarily used for in DevOps and containerization?

a. Managing cloud infrastructure

b. Running virtual machines

c. Packaging and deploying applications in containers

d. Managing network security

Answer : (c) Packaging and deploying applications in containers

6) What is the primary purpose of Azure DevOps?

a. Infrastructure management

b. Software development and delivery

c. Network security

d. Virtualization

Answer : (b) Software development and delivery

7) Which components are part of Azure DevOps?

a. Azure App Service and Azure Functions

b. Azure Monitor and Azure Security Center

c. Azure Boards and Azure Pipelines

d. Azure Virtual Machines and Azure SQL Database

Answer : (c) Azure Boards and Azure Pipelines

8) How does Azure DevOps support version control in software development?

a. It provides automated database backups.

b. It tracks changes in source code and manages versions.

c. It monitors server performance.

d. It optimizes network configurations.

Answer : (b) It tracks changes in source code and manages versions.

9) In Linux, what is the primary role of the root user?

a. Managing user accounts

b. Running GUI applications

c. Administrative tasks with superuser privileges

d. Monitoring network traffic

Answer : (c) Administrative tasks with superuser privileges

10) In Azure DevOps, which component is used to define, build, test, and deploy applications?

a. Azure Boards

b. Azure Repos

c. Azure Pipelines

d. Azure Artifacts

Answer : (c) Azure Pipelines

Section 2: Labs

Lab 1: File and Directory Management

Tasks:

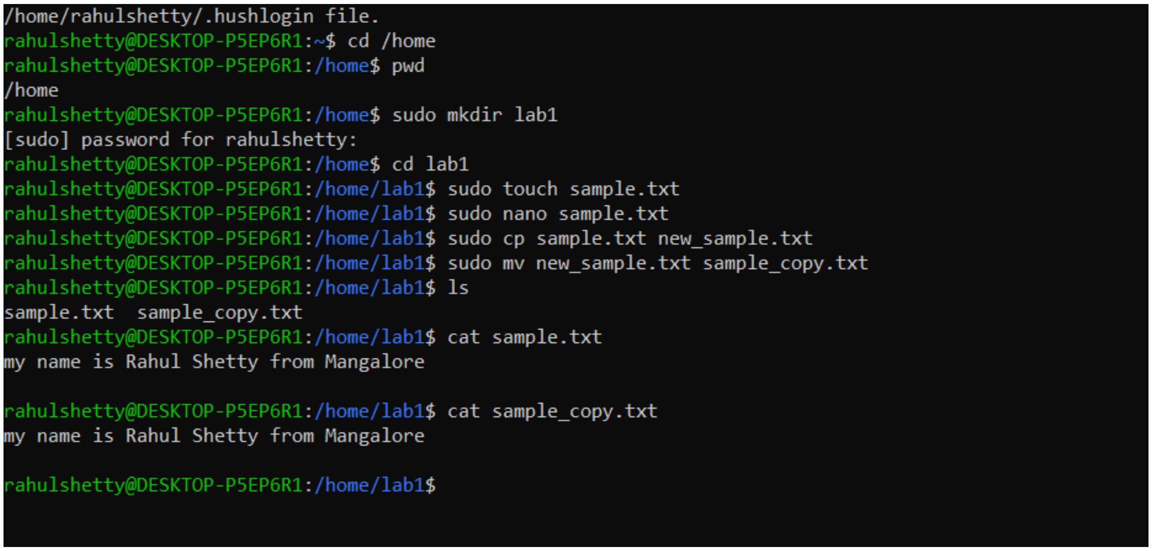
1. Create a directory called “lab1” in your home directory.

2. Inside “lab1” create a text file named “sample.txt” with some content.

3. Make a copy of “sample.txt” and name it “sample_copy.txt”

4. Rename “sample_copy.txt” to “new_sample.txt”

5. List the files in the “lab1” directory to confirm their names.



```
/home/rahulshetty/.hushlogin file.
rahulshetty@DESKTOP-P5EP6R1:~$ cd /home
rahulshetty@DESKTOP-P5EP6R1:/home$ pwd
/home
rahulshetty@DESKTOP-P5EP6R1:/home$ sudo mkdir lab1
[sudo] password for rahulshetty:
rahulshetty@DESKTOP-P5EP6R1:/home$ cd lab1
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo touch sample.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo nano sample.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo cp sample.txt new_sample.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo mv new_sample.txt sample_copy.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ ls
sample.txt  sample_copy.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ cat sample.txt
my name is Rahul Shetty from Mangalore

rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ cat sample_copy.txt
my name is Rahul Shetty from Mangalore

rahulshetty@DESKTOP-P5EP6R1:/home/lab1$
```

Lab 2: Permissions and Ownership

Objective: Understand and manage file permissions and ownership.

Tasks:

1. Create a new file named “secret.txt” in the “lab2” directory.

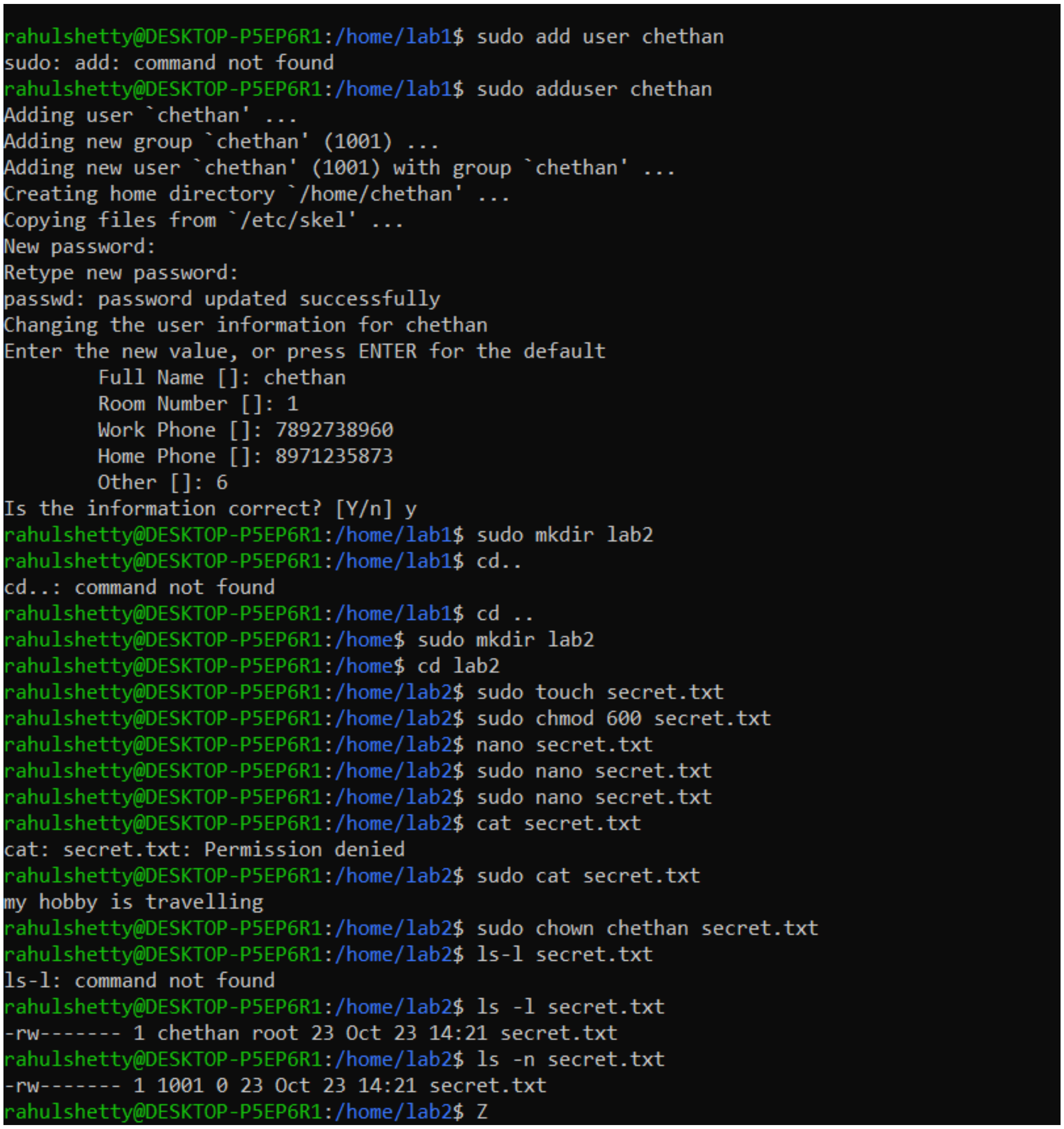
2. Set the file permissions to allow read and write access only to the

owner.

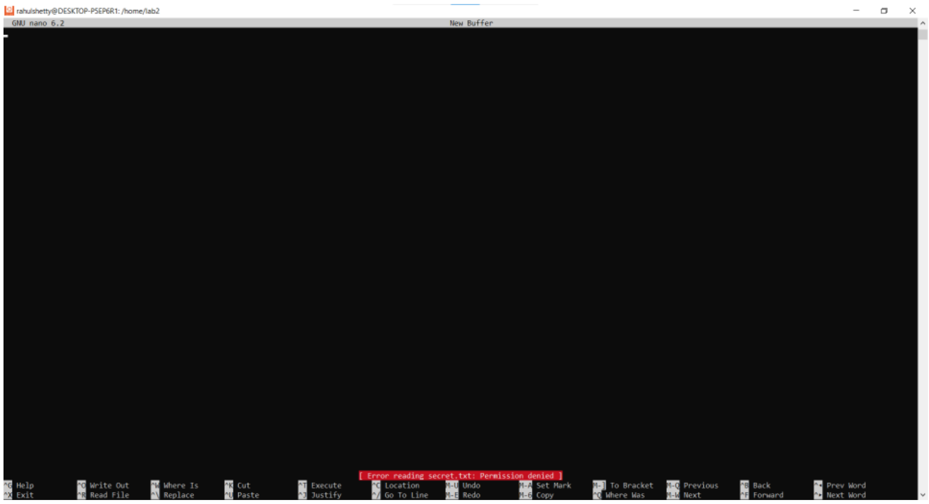
3. Change the owner of “secret.txt” to another user.

4. Verify the new permissions and owner using the ls -l and ls -n

commands.

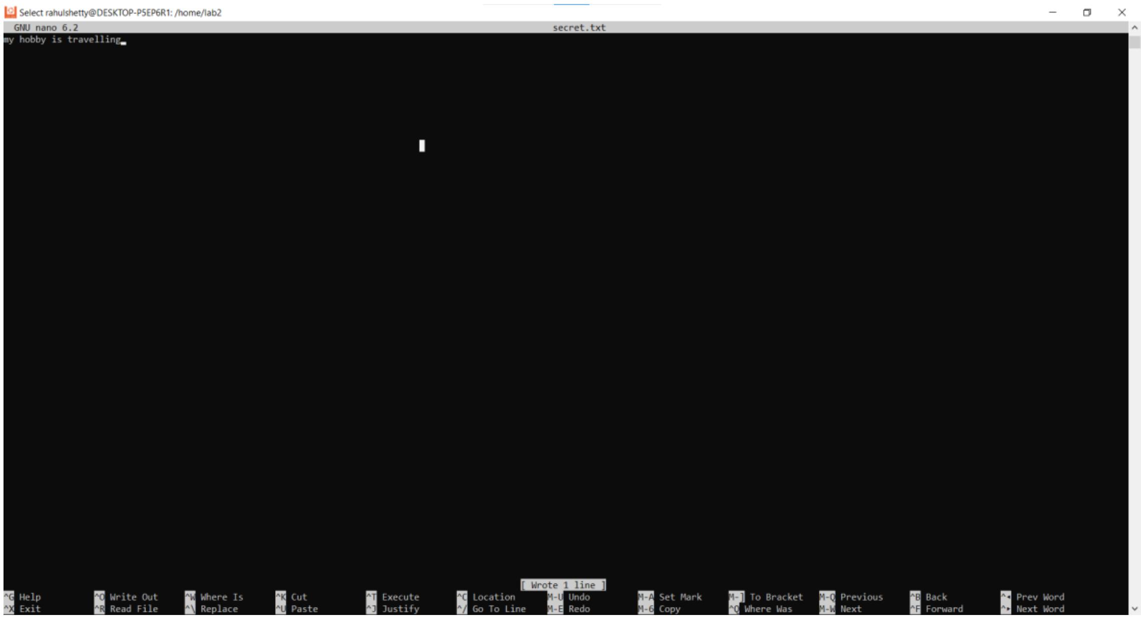


```
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo add user chethan
sudo: add: command not found
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo adduser chethan
Adding user `chethan' ...
Adding new group `chethan' (1001) ...
Adding new user `chethan' (1001) with group `chethan' ...
Creating home directory `/home/chethan' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for chethan
Enter the new value, or press ENTER for the default
        Full Name []: chethan
        Room Number []: 1
        Work Phone []: 7892738960
        Home Phone []: 8971235873
        Other []: 6
Is the information correct? [Y/n] y
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ sudo mkdir lab2
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ cd..
cd..: command not found
rahulshetty@DESKTOP-P5EP6R1:/home/lab1$ cd ..
rahulshetty@DESKTOP-P5EP6R1:/home$ sudo mkdir lab2
rahulshetty@DESKTOP-P5EP6R1:/home$ cd lab2
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo touch secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo chmod 600 secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ nano secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo nano secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo nano secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ cat secret.txt
cat: secret.txt: Permission denied
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo cat secret.txt
my hobby is travelling
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ sudo chown chethan secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ ls-l secret.txt
ls-l: command not found
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ ls -l secret.txt
-rw------- 1 chethan root 23 Oct 23 14:21 secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ ls -n secret.txt
-rw------- 1 1001 0 23 Oct 23 14:21 secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ Z
```



```
rahulshetty@DESKTOP-P5EP6R1: /home/lab2
  GNU nano 6.2                                New Buffer

                         [ Error reading secret.txt: Permission denied ]
```



```
Select rahulshetty@DESKTOP-P5EP6R1: /home/lab2
  GNU nano 6.2                                secret.txt
my hobby is travelling

                                          [ Wrote 1 line ]
```

Lab 3: Text Processing with Command Line Tools

Objective: Practice text processing using command-line tools.

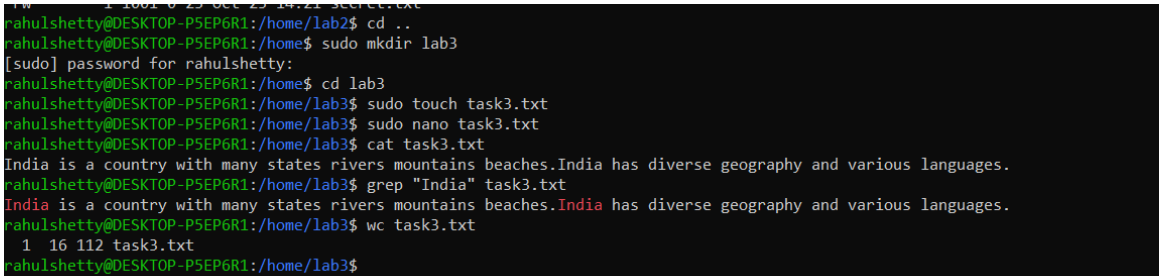
Tasks:

1. Create a text file with some random text in the “lab3” directory.

2. Use the grep command to search for a specific word or pattern in the file.

3. Use the sed command to replace a word or phrase with another in the file.

4. Use the wc command to count the number of lines, words, and characters in the file.



```
 rw          1 1001 0 25 Oct 25 14:21 secret.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab2$ cd ..
rahulshetty@DESKTOP-P5EP6R1:/home$ sudo mkdir lab3
[sudo] password for rahulshetty:
rahulshetty@DESKTOP-P5EP6R1:/home$ cd lab3
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$ sudo touch task3.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$ sudo nano task3.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$ cat task3.txt
India is a country with many states rivers mountains beaches.India has diverse geography and various languages.
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$ grep "India" task3.txt
India is a country with many states rivers mountains beaches.India has diverse geography and various languages.
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$ wc task3.txt
  1  16 112 task3.txt
rahulshetty@DESKTOP-P5EP6R1:/home/lab3$
```

## Lab 4: Creating a Simple YAML File

Objective: Create a basic YAML configuration file.

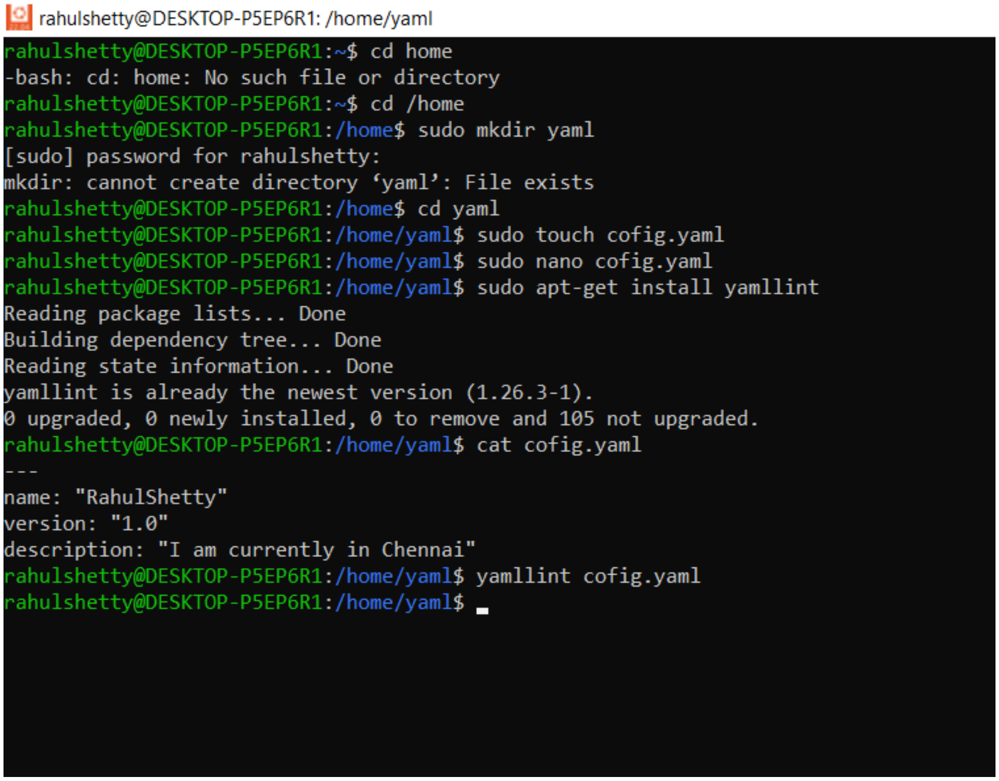
Task:

1. Create a YAML file named “config.yaml”

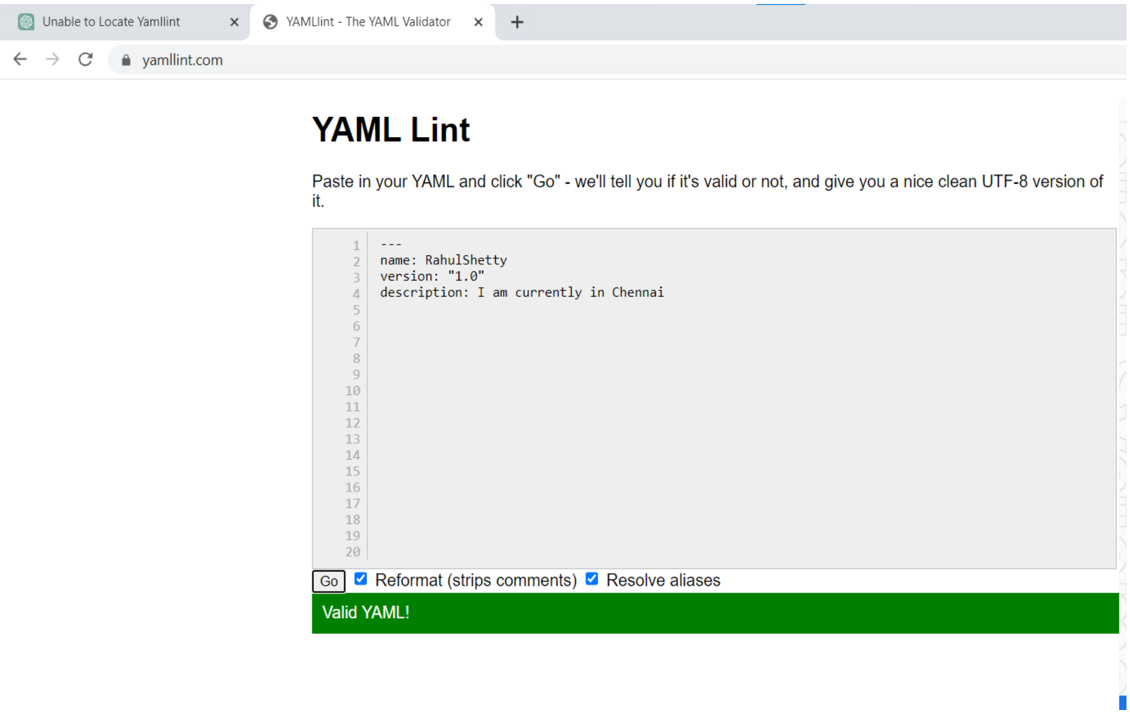
2. Define key-value pairs in YAML for a fictitious application, including name, version, and description.

3. Save the file.

4. Validate that the YAML file is correctly formatted.



```
rahulshetty@DESKTOP-P5EP6R1:~$ cd home
-bash: cd: home: No such file or directory
rahulshetty@DESKTOP-P5EP6R1:~$ cd /home
rahulshetty@DESKTOP-P5EP6R1:/home$ sudo mkdir yaml
[sudo] password for rahulshetty:
mkdir: cannot create directory ‘yaml’: File exists
rahulshetty@DESKTOP-P5EP6R1:/home$ cd yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo touch cofig.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo nano cofig.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo apt-get install yamllint
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
yamllint is already the newest version (1.26.3-1).
0 upgraded, 0 newly installed, 0 to remove and 105 not upgraded.
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ cat cofig.yaml
---
name: "RahulShetty"
version: "1.0"
description: "I am currently in Chennai"
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ yamllint cofig.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ _
```



YAML Lint

Paste in your YAML and click "Go" - we'll tell you if it's valid or not, and give you a nice clean UTF-8 version of it.

```
---
name: RahulShetty
version: "1.0"
description: I am currently in Chennai
```

Go ☑ Reformat (strips comments) ☑ Resolve aliases

Valid YAML!

## Lab 5: Working with Lists in YAML

Objective: Practice working with lists (arrays) in YAML.

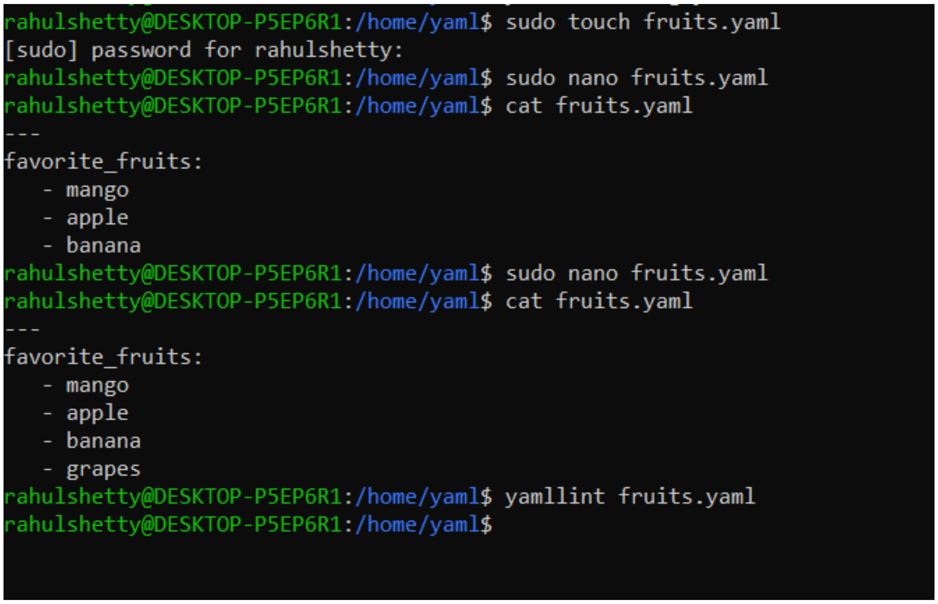
Task:

1. Create a YAML file named “fruits.yaml”

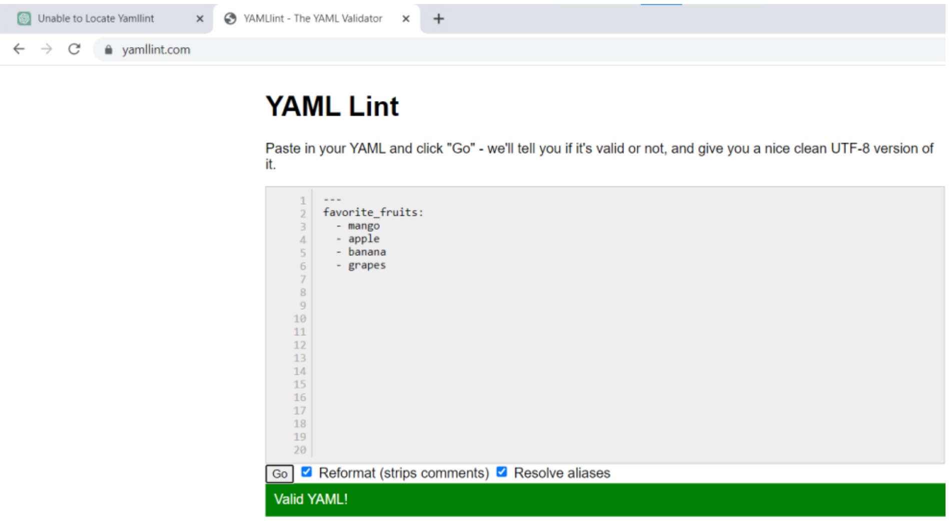
2. Define a list of your favorite fruits using YAML syntax.

3. Add items from the list.

4. Save and validate the YAML file.



```
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo touch fruits.yaml
[sudo] password for rahulshetty:
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo nano fruits.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ cat fruits.yaml
---
favorite_fruits:
   - mango
   - apple
   - banana
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo nano fruits.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ cat fruits.yaml
---
favorite_fruits:
   - mango
   - apple
   - banana
   - grapes
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ yamllint fruits.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$
```



## YAML Lint

Paste in your YAML and click "Go" - we'll tell you if it's valid or not, and give you a nice clean UTF-8 version of it.

```
---
favorite_fruits:
  - mango
  - apple
  - banana
  - grapes
```

Go ☑ Reformat (strips comments) ☑ Resolve aliases

Valid YAML!

Lab 6: Nested Structures in YAML

Objective: Explore nested structures within YAML.

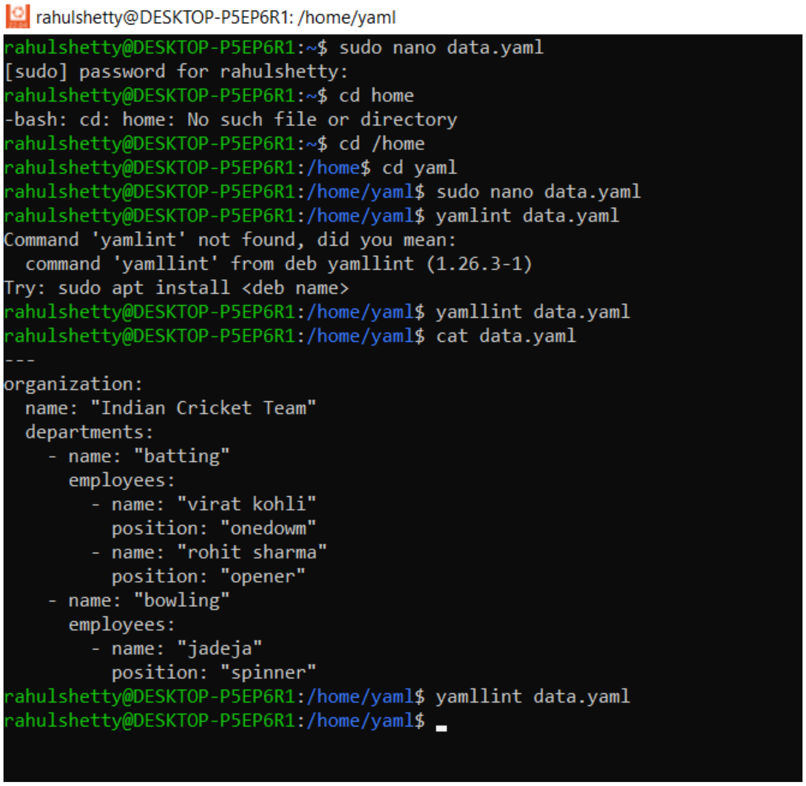
Task:

1. Create a YAML file named “data.yaml”

2. Define a nested structure representing a fictitious organization with departments and employees.

3. Use YAML syntax to add, update, or remove data within the nested structure.

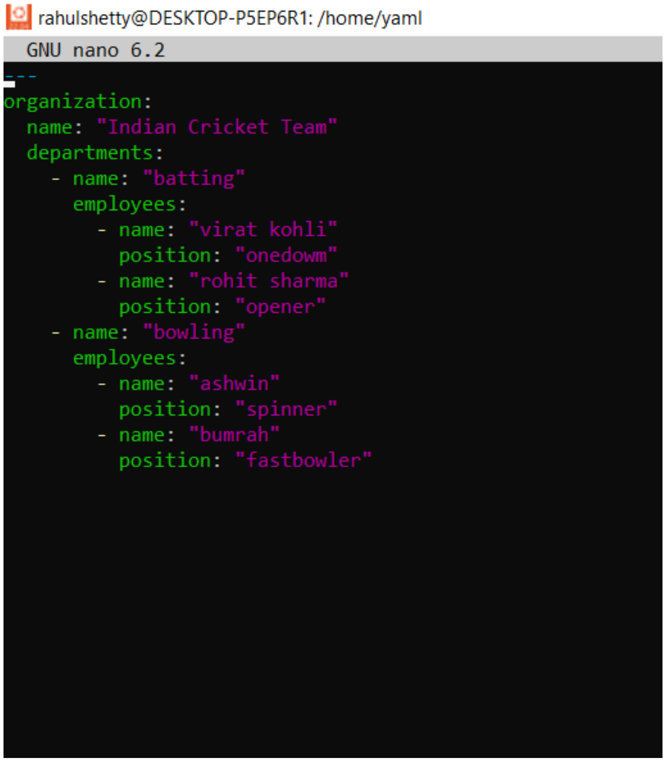
4. Save and validate the YAML file.



rahulshetty@DESKTOP-P5EP6R1: /home/yaml

```
rahulshetty@DESKTOP-P5EP6R1:~$ sudo nano data.yaml
[sudo] password for rahulshetty:
rahulshetty@DESKTOP-P5EP6R1:~$ cd home
-bash: cd: home: No such file or directory
rahulshetty@DESKTOP-P5EP6R1:~$ cd /home
rahulshetty@DESKTOP-P5EP6R1:/home$ cd yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ sudo nano data.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ yamlint data.yaml
Command 'yamlint' not found, did you mean:
  command 'yamllint' from deb yamllint (1.26.3-1)
Try: sudo apt install <deb name>
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ yamllint data.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ cat data.yaml
---
organization:
  name: "Indian Cricket Team"
  departments:
    - name: "batting"
      employees:
        - name: "virat kohli"
          position: "onedowm"
        - name: "rohit sharma"
          position: "opener"
    - name: "bowling"
      employees:
        - name: "jadeja"
          position: "spinner"
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$ yamllint data.yaml
rahulshetty@DESKTOP-P5EP6R1:/home/yaml$
```

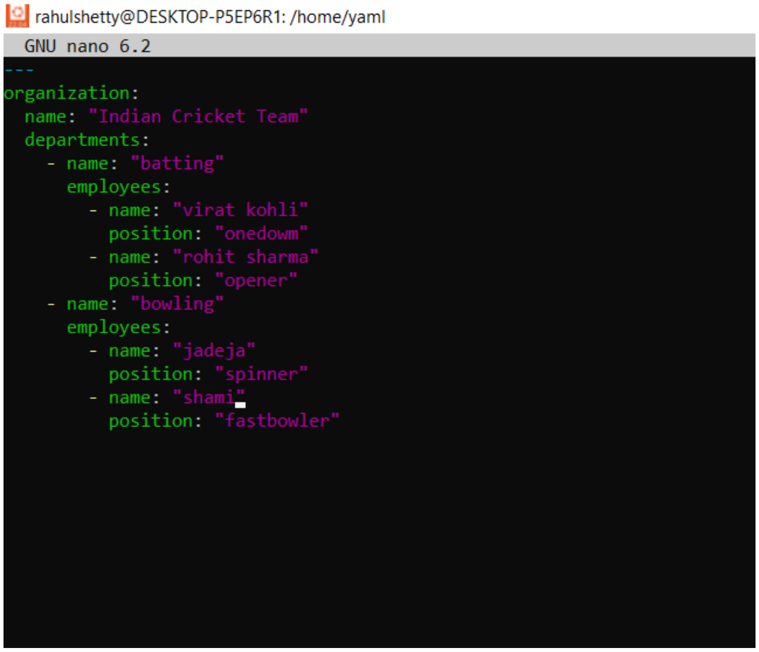
## Adding Data



rahulshetty@DESKTOP-P5EP6R1: /home/yaml

```
 GNU nano 6.2
---
organization:
  name: "Indian Cricket Team"
  departments:
    - name: "batting"
      employees:
        - name: "virat kohli"
          position: "onedowm"
        - name: "rohit sharma"
          position: "opener"
    - name: "bowling"
      employees:
        - name: "ashwin"
          position: "spinner"
        - name: "bumrah"
          position: "fastbowler"
```

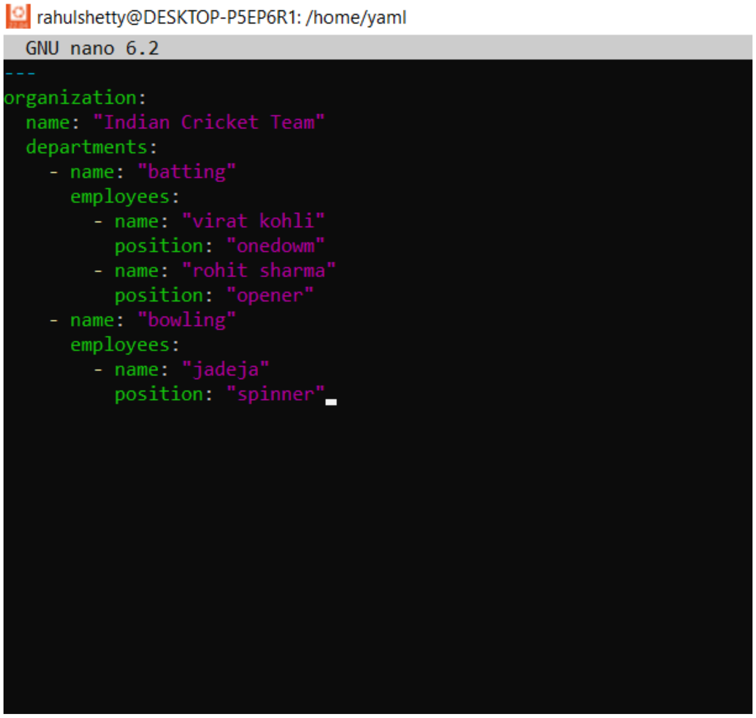
## Updating Data



rahulshetty@DESKTOP-P5EP6R1: /home/yaml

```
 GNU nano 6.2
---
organization:
  name: "Indian Cricket Team"
  departments:
    - name: "batting"
      employees:
        - name: "virat kohli"
          position: "onedowm"
        - name: "rohit sharma"
          position: "opener"
    - name: "bowling"
      employees:
        - name: "jadeja"
          position: "spinner"
        - name: "shami"
          position: "fastbowler"
```

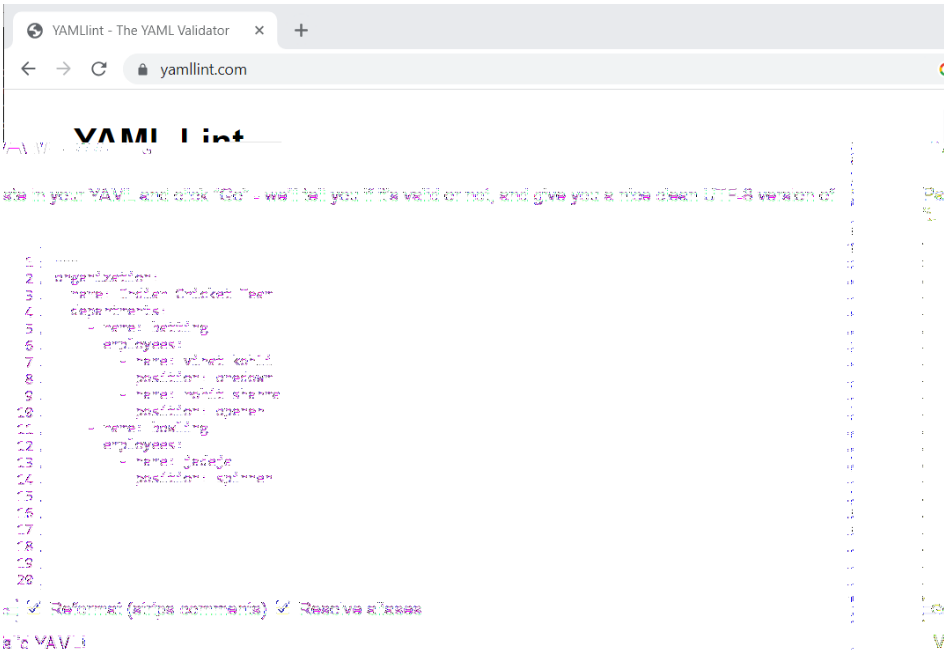
Removing Data



rahulshetty@DESKTOP-P5EP6R1: /home/yaml

GNU nano 6.2

```yaml
---
organization:
  name: "Indian Cricket Team"
  departments:
    - name: "batting"
      employees:
        - name: "virat kohli"
          position: "onedowm"
        - name: "rohit sharma"
          position: "opener"
    - name: "bowling"
      employees:
        - name: "jadeja"
          position: "spinner"
```



YAML Lint

ste in your YAML and click "Go" - we'll tell you if it's valid or not, and give you a nice clean UTF-8 version of

```yaml
---
organization:
  name: Indian Cricket Team
  departments:
    - name: batting
      employees:
        - name: virat kohli
          position: onedowm
        - name: rohit sharma
          position: opener
    - name: bowling
      employees:
        - name: jadeja
          position: spinner
```

☑ Reformat (strips comments) ☑ Resolve aliases

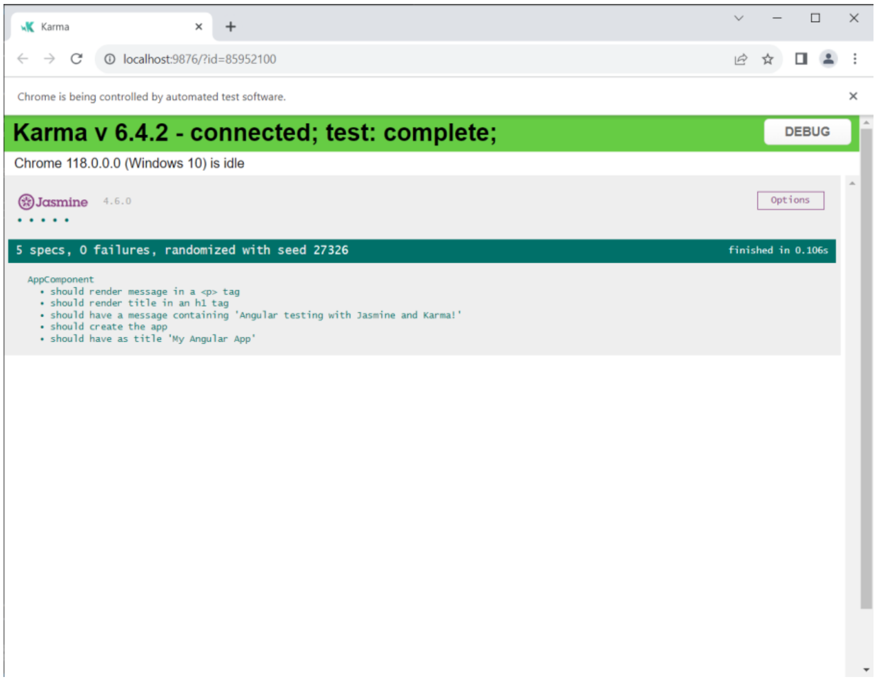
alid YAML

# Lab 7: Create Classic Azure CI Pipeline for Angular Application

Objective: Set up a classic Azure CI pipeline to build a simple Angular application with unit testing using Jasmine and Karma.

Tasks:

1. Create an Azure DevOps project.
2. Set up a classic CI pipeline to build an Angular application.
3. Configure the pipeline to use Jasmine and Karma for unit testing.
4. Run the pipeline and validate the test results.



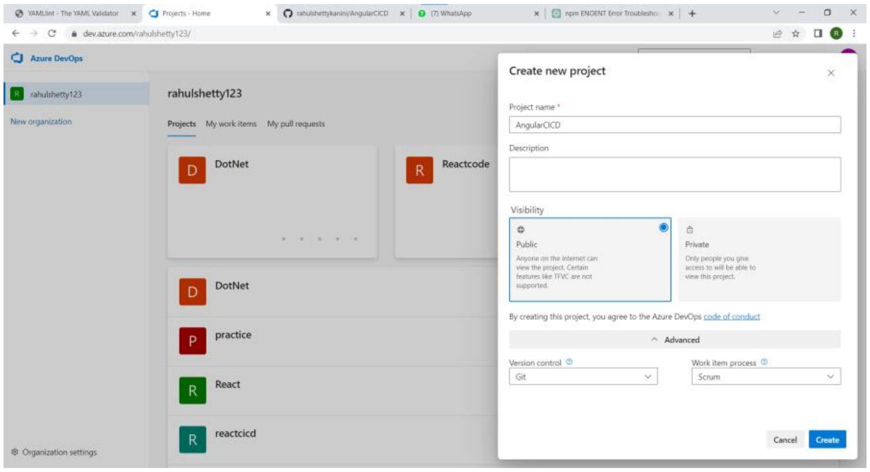
Chrome is being controlled by automated test software.

Karma v 6.4.2 - connected; test: complete;

Chrome 118.0.0.0 (Windows 10) is idle

```
• • • • •
5 specs, 0 failures, randomized with seed 27326                finished in 0.106s

AppComponent
  • should render message in a <p> tag
  • should render title in an h1 tag
  • should have a message containing 'Angular testing with Jasmine and Karma!'
  • should create the app
  • should have as title 'My Angular App'
```



Create new project

Project name * AngularCICD

Description

Visibility

● Public
Anyone on the internet can view the project. Certain features like TFVC are not supported.

○ Private
Only people you give access to will be able to view this project.

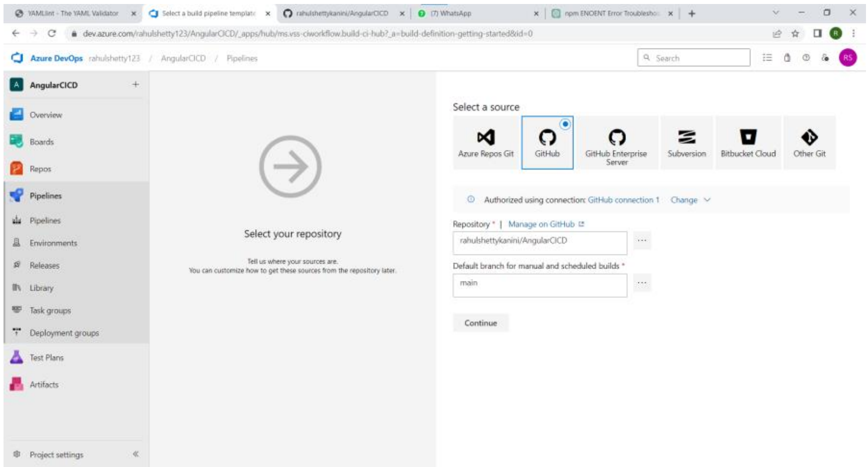
By creating this project, you agree to the Azure DevOps code of conduct

Advanced

Version control: Git

Work item process: Scrum

Cancel  Create


YAMLlint - The YAML Validator
Select a build pipeline template
rahulshettykanini/AngularCICD
(7) WhatsApp
npm ENOENT Error Troubleshoo
dev.azure.com/rahulshetty123/AngularCICD/_apps/hub/ms.vss-ciworkflow.build-ci-hub?_a=build-definition-getting-started&id=0
Azure DevOps
rahulshetty123
AngularCICD
Pipelines
Search
AngularCICD
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Releases
Library
Task groups
Deployment groups
Test Plans
Artifacts
Project settings

Select your repository

Tell us where your sources are.
You can customize how to get these sources from the repository later.

Select a source

Azure Repos Git | [✓ GitHub] | GitHub Enterprise Server | Subversion | Bitbucket Cloud | Other Git

Authorized using connection: GitHub connection 1  Change

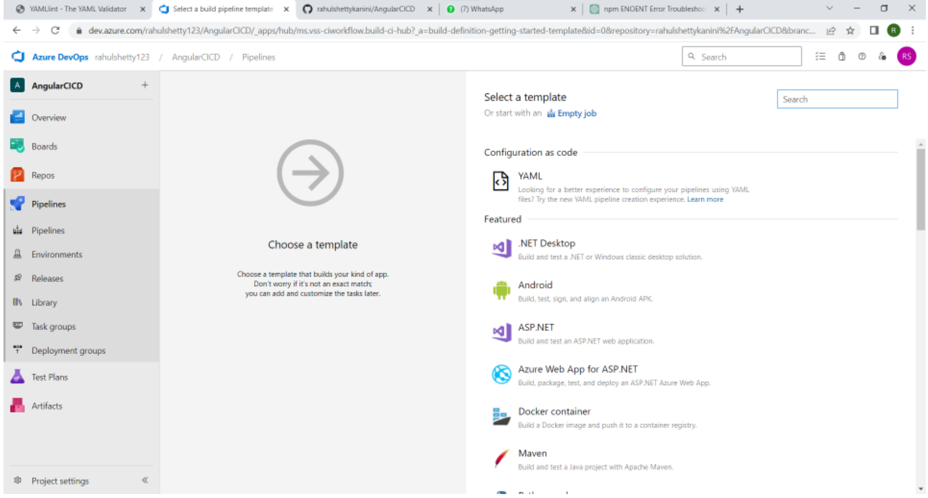
Repository * | Manage on GitHub

rahulshettykanini/AngularCICD

Default branch for manual and scheduled builds *

main

Continue


YAMLlint - The YAML Validator
Select a build pipeline template
rahulshettykanini/AngularCICD
(7) WhatsApp
npm ENOENT Error Troubleshoo
dev.azure.com/rahulshetty123/AngularCICD/_apps/hub/ms.vss-ciworkflow.build-ci-hub?_a=build-definition-getting-started-template&id=0&repository=rahulshettykanini%2FAngularCICD&branc...
Azure DevOps
rahulshetty123
AngularCICD
Pipelines
Search
AngularCICD
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Releases
Library
Task groups
Deployment groups
Test Plans
Artifacts
Project settings

Choose a template

Choose a template that builds your kind of app.
Don't worry if it's not an exact match;
you can add and customize the tasks later.

Select a template

Or start with an Empty job

Configuration as code

YAML
Looking for a better experience to configure your pipelines using YAML files? Try the new YAML pipeline creation experience. Learn more

Featured

.NET Desktop
Build and test a .NET or Windows classic desktop solution.

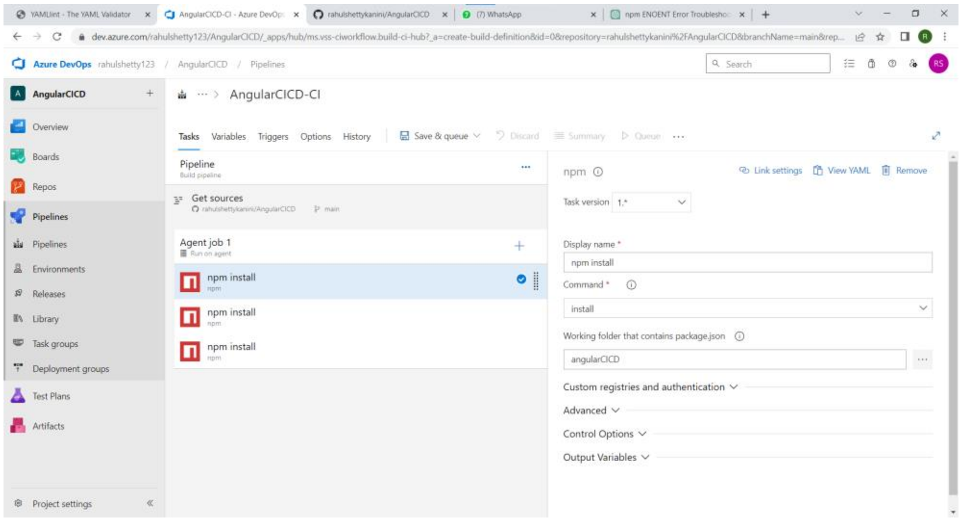
Android
Build, test, sign, and align an Android APK.

ASP.NET
Build and test an ASP.NET web application.

Azure Web App for ASP.NET
Build, package, test, and deploy an ASP.NET Azure Web App.

Docker container
Build a Docker image and push it to a container registry.

Maven
Build and test a Java project with Apache Maven.



dev.azure.com/rahulshetty123/AngularCICD/_apps/hub/ms.vss-ciworkflow.build-ci-hub?_a=create-build-definition&id=0&repository=rahulshettykanini%2FAngularCICD&branchName=main&rep...

AngularCICD-CI

Pipeline
Build pipeline

Get sources
rahulshettykanini/AngularCICD main

Agent job 1
Run on agent

npm install
npm

npm install
npm

npm install
npm

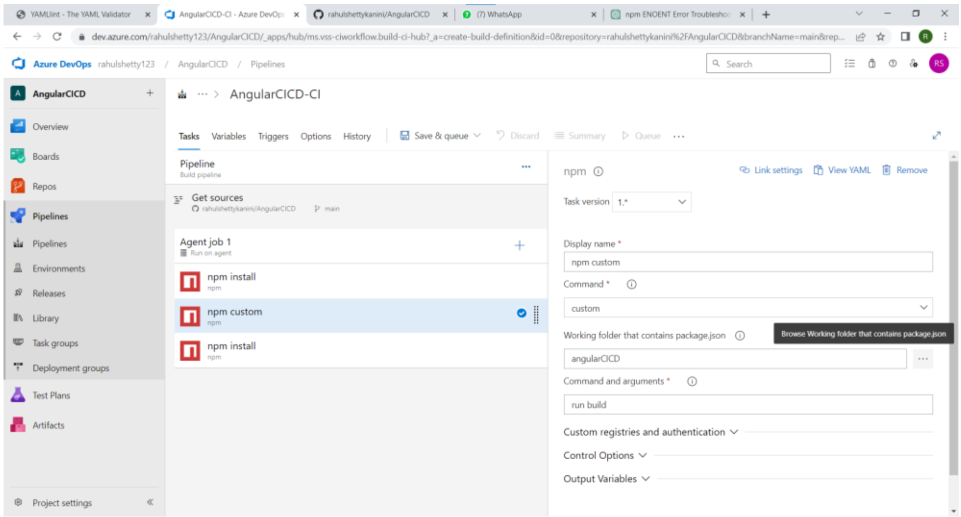
npm

Task version: 1.*

Display name *: npm install

Command *: install

Working folder that contains package.json: angularCICD



dev.azure.com/rahulshetty123/AngularCICD/_apps/hub/ms.vss-ciworkflow.build-ci-hub?_a=create-build-definition&id=0&repository=rahulshettykanini%2FAngularCICD&branchName=main&rep...

AngularCICD-CI

Pipeline
Build pipeline

Get sources
rahulshettykanini/AngularCICD main

Agent job 1
Run on agent

npm install
npm

npm custom
npm

npm install
npm

npm

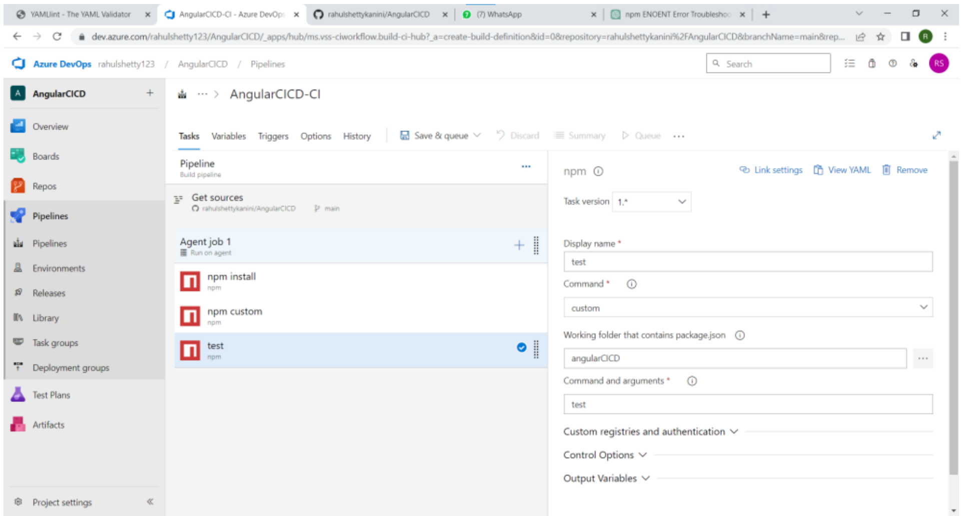
Task version: 1.*

Display name *: npm custom

Command *: custom

Working folder that contains package.json: angularCICD

Command and arguments *: run build



dev.azure.com/rahulshetty123/AngularCICD/_apps/hub/ms.vss-ciworkflow.build-ci-hub?_a=create-build-definition&id=0&repository=rahulshettykanini%2FAngularCICD&branchName=main&rep...

Azure DevOps rahulshetty123 / AngularCICD / Pipelines

AngularCICD-CI

Pipeline
Build pipeline

Get sources
rahulshettykanini/AngularCICD main

Agent job 1
Run on agent

npm install
npm

npm custom
npm

test
npm

npm

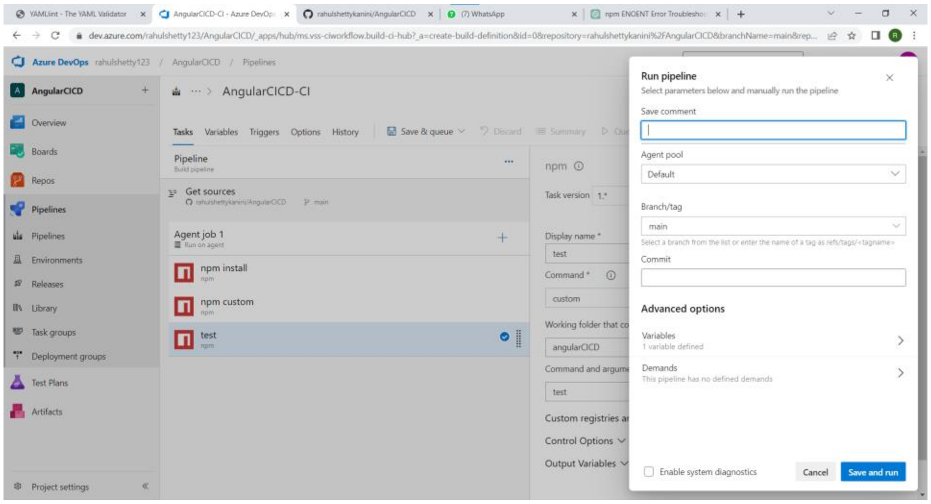
Task version: 1.*

Display name *: test

Command *: custom

Working folder that contains package.json: angularCICD

Command and arguments *: test



Run pipeline

Select parameters below and manually run the pipeline

Save comment:

Agent pool: Default

Branch/tag: main

Select a branch from the list or enter the name of a tag as refs/tags/<tagname>

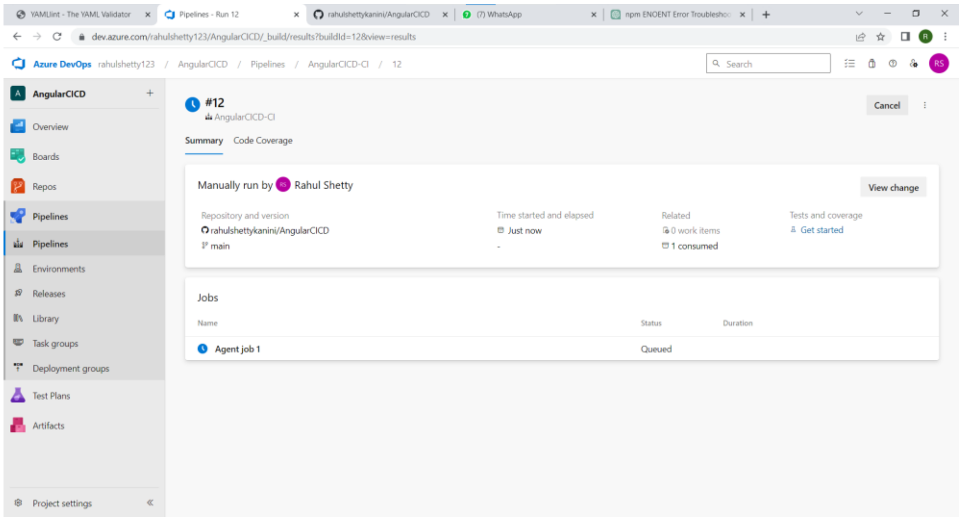
Commit:

Advanced options

Variables
1 variable defined

Demands
This pipeline has no defined demands

□ Enable system diagnostics



dev.azure.com/rahulshetty123/AngularCICD/_build/results?buildId=12&view=results

Azure DevOps rahulshetty123 / AngularCICD / Pipelines / AngularCICD-CI / 12

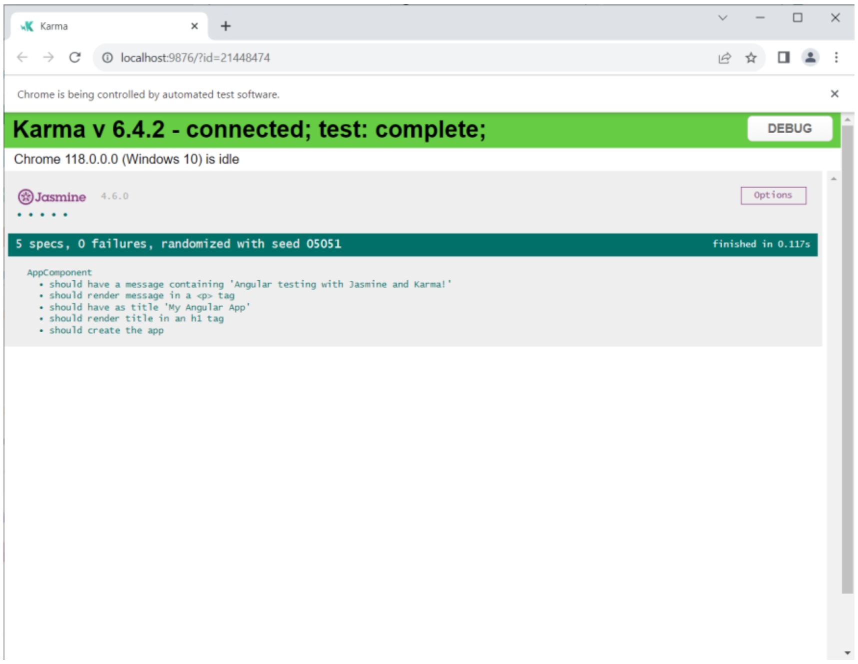
#12
AngularCICD-CI

Manually run by Rahul Shetty

| Repository and version | Time started and elapsed | Related | Tests and coverage |
|---|---|---|---|
| rahulshettykanini/AngularCICD | Just now | 0 work items | Get started |
| main | - | 1 consumed | |

Jobs

| Name | Status | Duration |
|---|---|---|
| Agent job 1 | Queued | |



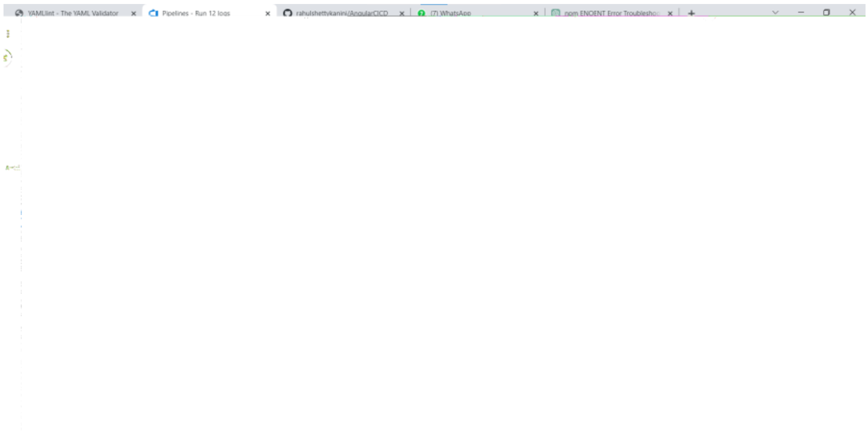
Chrome is being controlled by automated test software.

Karma v 6.4.2 - connected; test: complete;

Chrome 118.0.0.0 (Windows 10) is idle

```
5 specs, 0 failures, randomized with seed 05051                finished in 0.117s

AppComponent
  • should have a message containing 'Angular testing with Jasmine and Karma!'
  • should render message in a <p> tag
  • should have as title 'My Angular App'
  • should render title in an h1 tag
  • should create the app
```


YAMLlint - The YAML Validator
Pipelines - Run 12 logs
rahulshettykanini/AngularCICD
(7) WhatsApp
npm ENOENT Error Troublesho

## Lab 8: Create YAML Azure CI Pipeline for React Application

Objective: Create a YAML-based Azure CI pipeline to build a simple React application with unit testing using Enzyme and Jest.

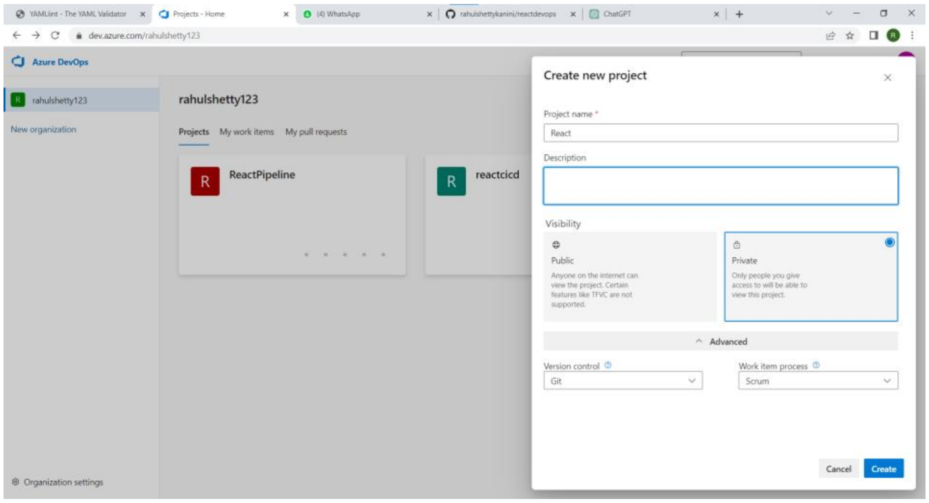
Tasks:

1. Create an Azure DevOps project.

2. Create a YAML-based CI pipeline to build a React application.

3. Configure the pipeline to use Enzyme and Jest for unit testing.

4. Trigger the pipeline and verify the test results.



Project name * React

Description

Visibility

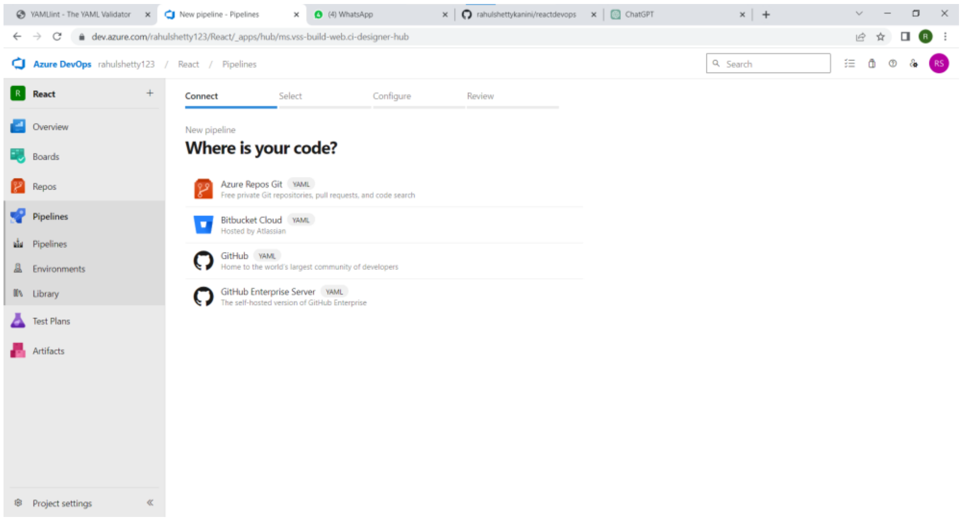
Public: Anyone on the internet can view the project. Certain features like TFVC are not supported.

● Private: Only people you give access to will be able to view this project.

Advanced

Version control: Git

Work item process: Scrum



New pipeline

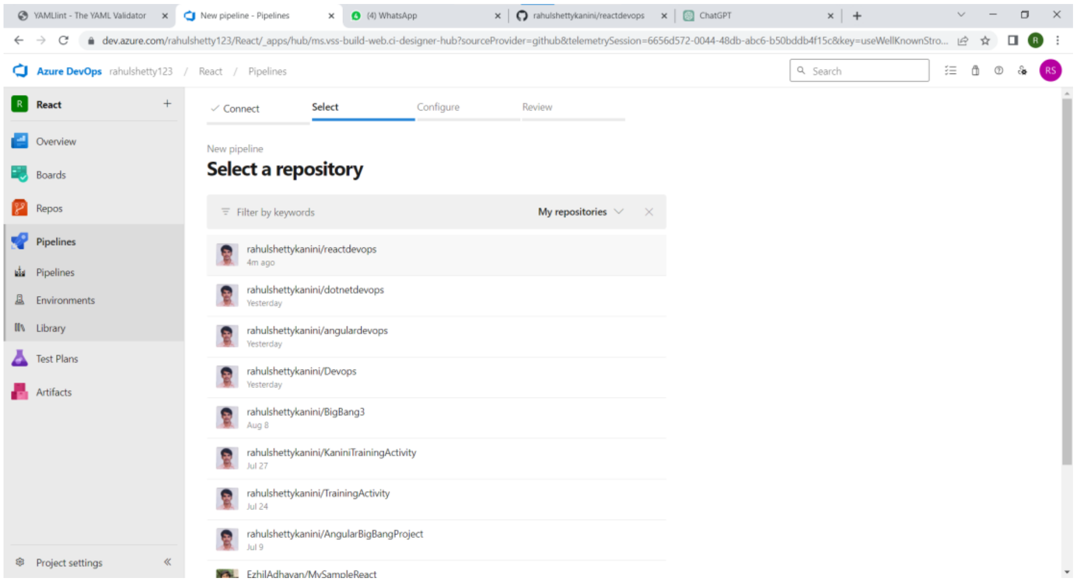
Where is your code?

Azure Repos Git YAML — Free private Git repositories, pull requests, and code search

Bitbucket Cloud YAML — Hosted by Atlassian

GitHub YAML — Home to the world's largest community of developers

GitHub Enterprise Server YAML — The self-hosted version of GitHub Enterprise


YAMLlint - The YAML Validator
New pipeline - Pipelines
(4) WhatsApp
rahulshettykanini/reactdevops
ChatGPT
dev.azure.com/rahulshetty123/React/_apps/hub/ms.vss-build-web.ci-designer-hub?sourceProvider=github&telemetrySession=6656d572-0044-48db-abc6-b50bddb4f15c&key=useWellKnownStro...
Azure DevOps rahulshetty123 / React / Pipelines
Search
React
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Library
Test Plans
Artifacts
Project settings
✓ Connect
Select
Configure
Review

New pipeline

Select a repository

Filter by keywords — My repositories

rahulshettykanini/reactdevops
4m ago

rahulshettykanini/dotnetdevops
Yesterday

rahulshettykanini/angulardevops
Yesterday

rahulshettykanini/Devops
Yesterday

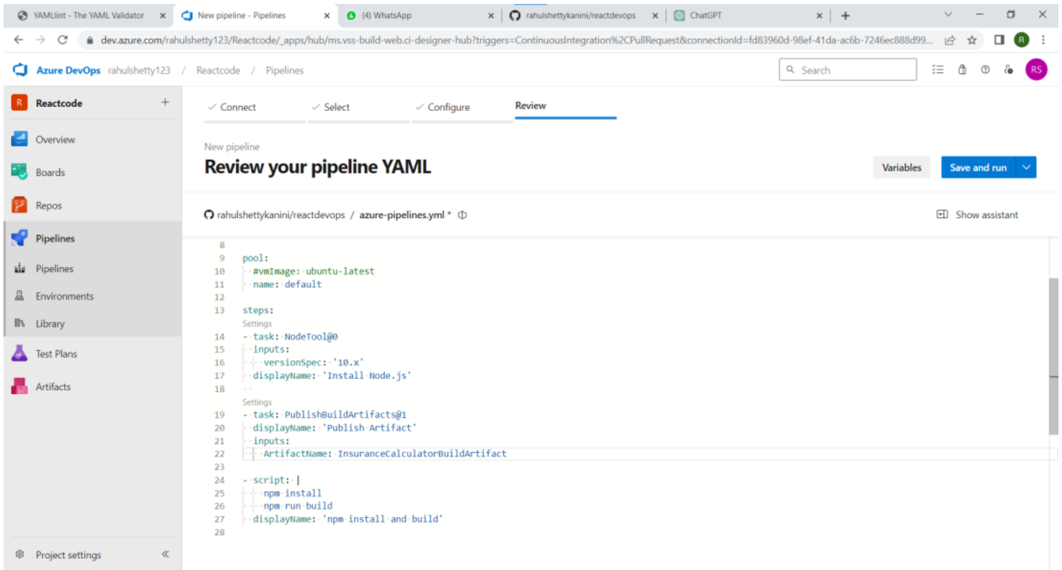
rahulshettykanini/BigBang3
Aug 8

rahulshettykanini/KaniniTrainingActivity
Jul 27

rahulshettykanini/TrainingActivity
Jul 24

rahulshettykanini/AngularBigBangProject
Jul 9

EzhilAdhavan/MySampleReact


YAMLlint - The YAML Validator
New pipeline - Pipelines
(4) WhatsApp
rahulshettykanini/reactdevops
ChatGPT
dev.azure.com/rahulshetty123/Reactcode/_apps/hub/ms.vss-build-web.ci-designer-hub?triggers=ContinuousIntegration%2CPullRequest&connectionId=fd83960d-98ef-41da-ac6b-7246ec888d99...
Azure DevOps rahulshetty123 / Reactcode / Pipelines
Search
Reactcode
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Library
Test Plans
Artifacts
Project settings
✓ Connect
✓ Select
✓ Configure
Review
Variables
Save and run
Show assistant

New pipeline

Review your pipeline YAML

rahulshettykanini/reactdevops / azure-pipelines.yml *

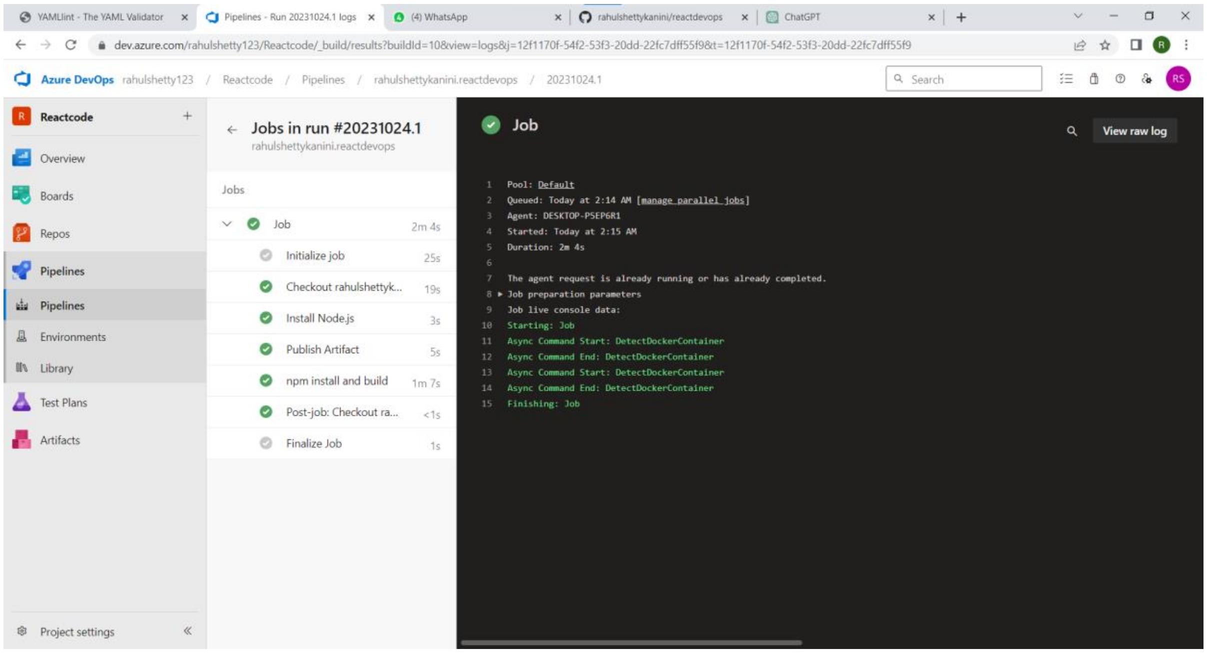
```

pool:
  #vmImage: ubuntu-latest
  name: default

steps:
Settings
- task: NodeTool@0
  inputs:
    versionSpec: '10.x'
  displayName: 'Install Node.js'
  
Settings
- task: PublishBuildArtifacts@1
  displayName: 'Publish Artifact'
  inputs:
    ArtifactName: InsuranceCalculatorBuildArtifact

- script: |
    npm install
    npm run build
  displayName: 'npm install and build'

```


YAMLlint - The YAML Validator
Pipelines - Run 20231024.1 logs
(4) WhatsApp
rahulshettykanini/reactdevops
ChatGPT
dev.azure.com/rahulshetty123/Reactcode/_build/results?buildId=10&view=logs&j=12f1170f-54f2-53f3-20dd-22fc7dff55f9&t=12f1170f-54f2-53f3-20dd-22fc7dff55f9
Azure DevOps
rahulshetty123 / Reactcode / Pipelines / rahulshettykanini.reactdevops / 20231024.1
Search
Reactcode
Overview
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Pipelines
Pipelines
Environments
Library
Test Plans
Artifacts
Project settings
View raw log

Jobs in run #20231024.1
rahulshettykanini.reactdevops

Jobs

| | |
|---|---|
| Job | 2m 4s |
| Initialize job | 25s |
| Checkout rahulshettyk... | 19s |
| Install Node.js | 3s |
| Publish Artifact | 5s |
| npm install and build | 1m 7s |
| Post-job: Checkout ra... | <1s |
| Finalize Job | 1s |

Job

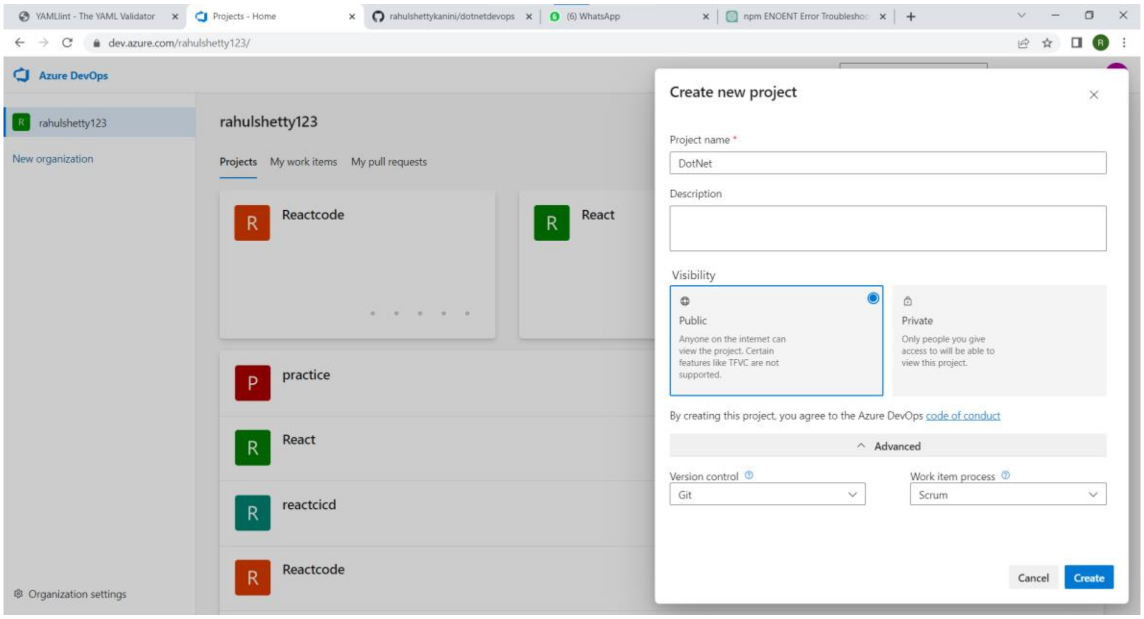
```
Pool: Default
Queued: Today at 2:14 AM [manage parallel jobs]
Agent: DESKTOP-P5EP6R1
Started: Today at 2:15 AM
Duration: 2m 4s

The agent request is already running or has already completed.
▶ Job preparation parameters
Job live console data:
Starting: Job
Async Command Start: DetectDockerContainer
Async Command End: DetectDockerContainer
Async Command Start: DetectDockerContainer
Async Command End: DetectDockerContainer
Finishing: Job
```

Lab 9: Create CI Pipeline for .NET Core Application with MS Unit Test

Objective: Create a CI pipeline, either classic or YAML, to build a .NET Core application and run MS Unit tests.

Tasks:

1. Set up a new Azure DevOps project.
2. Create a CI/CD pipeline for a .NET Core application.
3. Configure the pipeline to use MS Unit tests.
4. Trigger the pipeline and validate the test results.



Create new project

Project name *

DotNet

Description

Visibility

● Public
Anyone on the internet can view the project. Certain features like TFVC are not supported.

○ Private
Only people you give access to will be able to view this project.

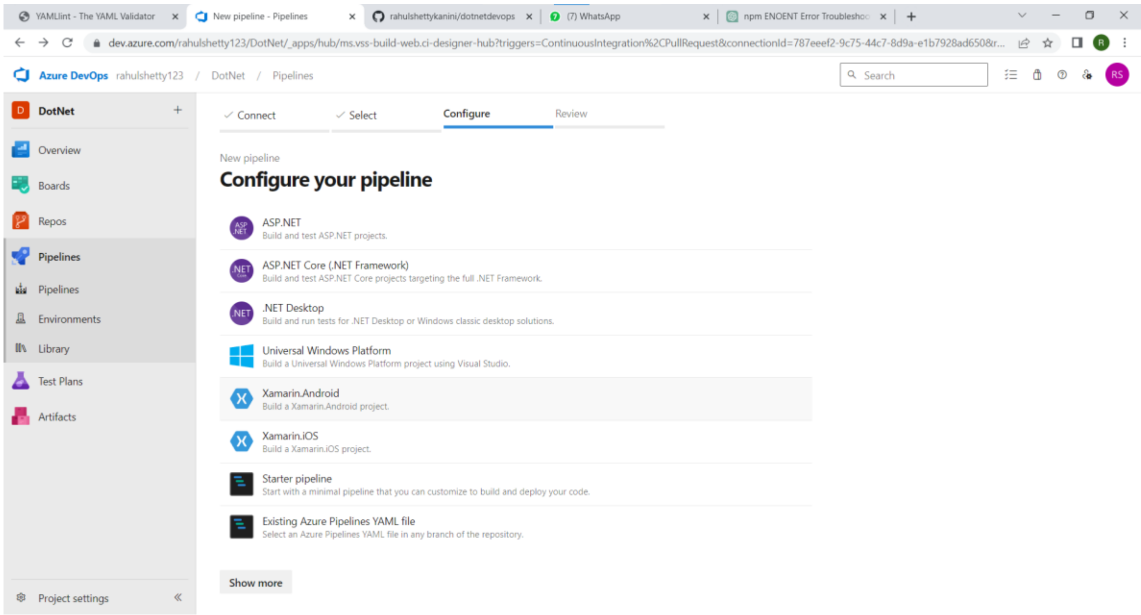
By creating this project, you agree to the Azure DevOps code of conduct

Advanced

Version control: Git

Work item process: Scrum

Cancel Create



dev.azure.com/rahulshetty123/DotNet/_apps/hub/ms.vss-build-web.ci-designer-hub?triggers=ContinuousIntegration%2CPullRequest&connectionId=787eeef2-9c75-44c7-8d9a-e1b7928ad6508r...

New pipeline

Configure your pipeline

ASP.NET
Build and test ASP.NET projects.

ASP.NET Core (.NET Framework)
Build and test ASP.NET Core projects targeting the full .NET Framework.

.NET Desktop
Build and run tests for .NET Desktop or Windows classic desktop solutions.

Universal Windows Platform
Build a Universal Windows Platform project using Visual Studio.

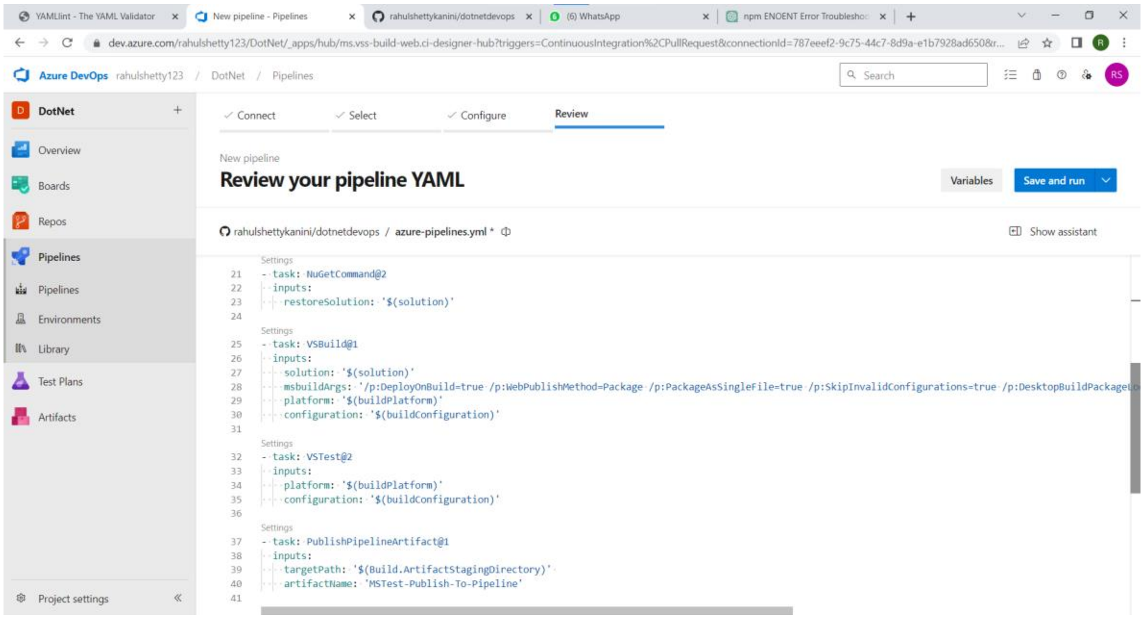
Xamarin.Android
Build a Xamarin.Android project.

Xamarin.iOS
Build a Xamarin.iOS project.

Starter pipeline
Start with a minimal pipeline that you can customize to build and deploy your code.

Existing Azure Pipelines YAML file
Select an Azure Pipelines YAML file in any branch of the repository.

Show more



YAMLlint - The YAML Validator
New pipeline - Pipelines
rahulshettykanini/dotnetdevops
(6) WhatsApp
npm ENOENT Error Troubleshoo
dev.azure.com/rahulshetty123/DotNet/_apps/hub/ms.vss-build-web.ci-designer-hub?triggers=ContinuousIntegration%2CPullRequest&connectionId=787eeef2-9c75-44c7-8d9a-e1b7928ad650&r...
Azure DevOps rahulshetty123 / DotNet / Pipelines
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Pipelines
Environments
Library
Test Plans
Artifacts
Project settings
Connect
Select
Configure
Review
New pipeline
Variables
Save and run
Show assistant

Review your pipeline YAML

rahulshettykanini/dotnetdevops / azure-pipelines.yml *

```
Settings
- task: NuGetCommand@2
  inputs:
    restoreSolution: '$(solution)'

Settings
- task: VSBuild@1
  inputs:
    solution: '$(solution)'
    msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingleFile=true /p:SkipInvalidConfigurations=true /p:DesktopBuildPackageL
    platform: '$(buildPlatform)'
    configuration: '$(buildConfiguration)'

Settings
- task: VSTest@2
  inputs:
    platform: '$(buildPlatform)'
    configuration: '$(buildConfiguration)'

Settings
- task: PublishPipelineArtifact@1
  inputs:
    targetPath: '$(Build.ArtifactStagingDirectory)'
    artifactName: 'MSTest-Publish-To-Pipeline'

```

Lab 10: Creating a Docker Image for a .NET Core Web API and Running it in Rancher Desktop

Objective: In this lab, you will create a Docker image for a sample .NET Core Web API application and then run the Web API container in Rancher Desktop.

Prerequisites:

Rancher Desktop installed and running.

.NET Core SDK installed on your machine.

Tasks

Step 1: Create a .NET Core Web API Project

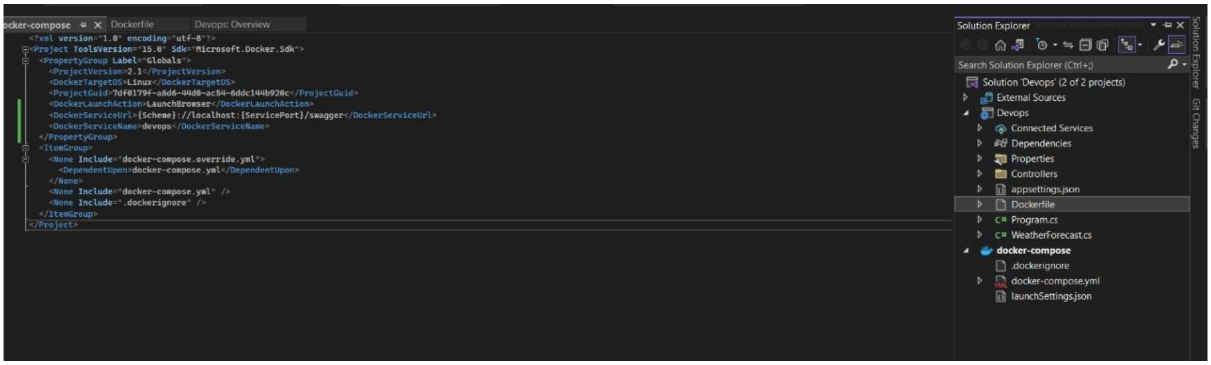
Step 2: Build the .NET Core Web API Project

Step 3: Dockerize the .NET Core Web API

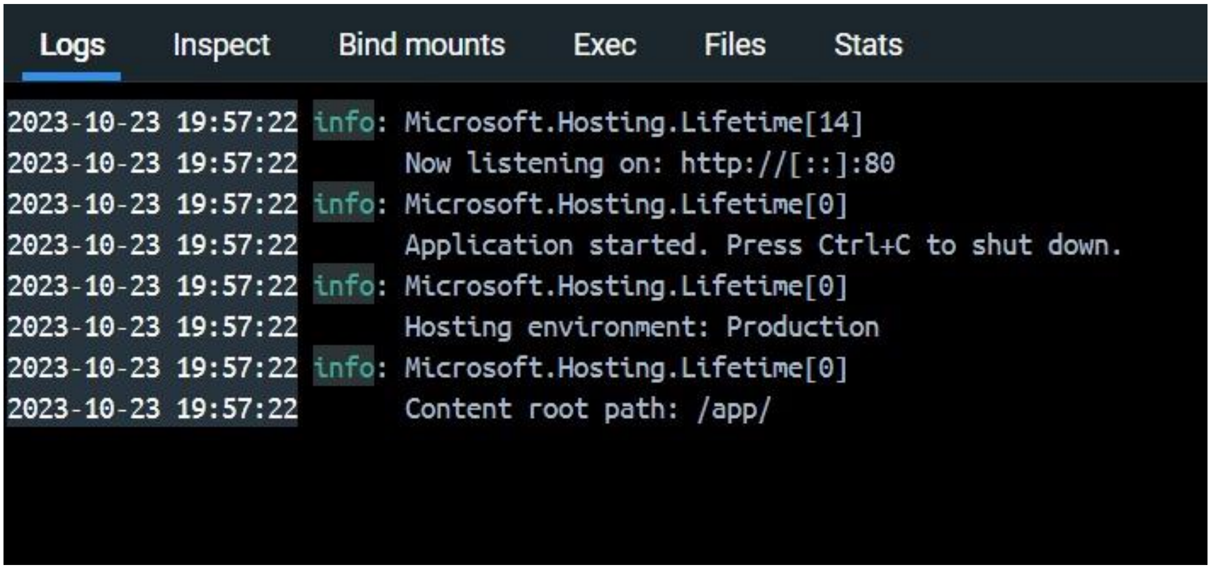
Step 4: Build the Docker Image

Step 5: Run the Docker Container in Rancher Desktop

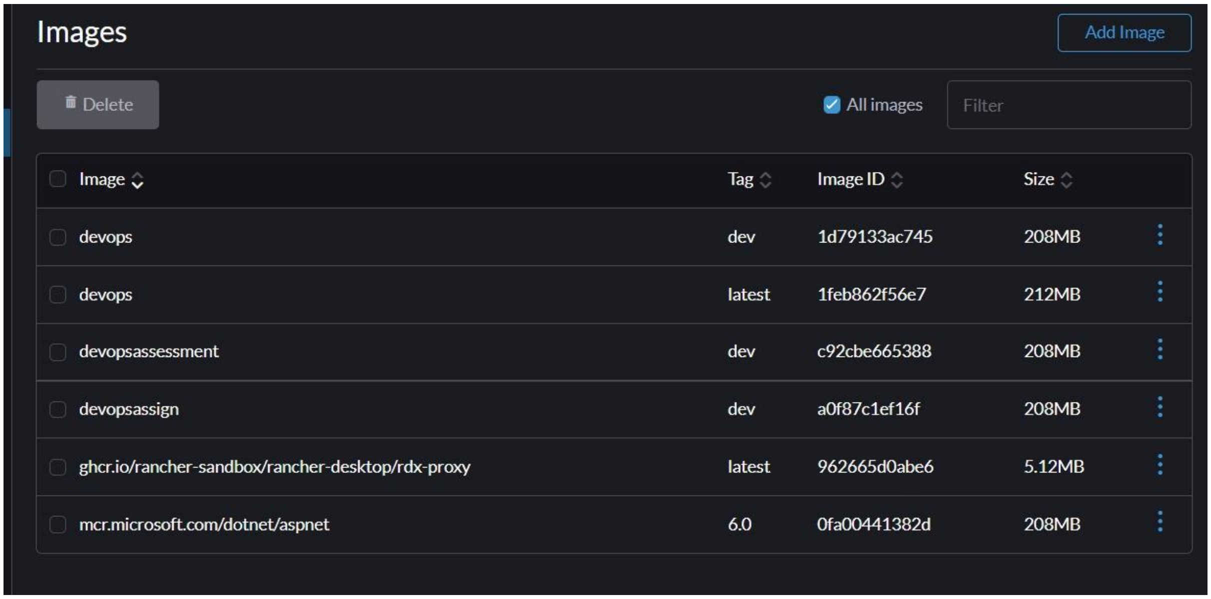
Step 6: Test the .NET Core Web API via swagger.



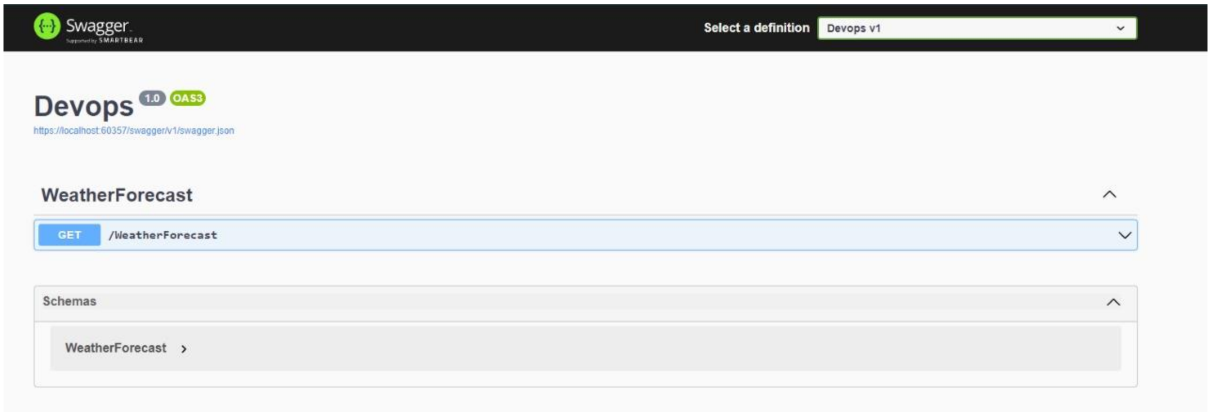
```
<?xml version="1.0" encoding="utf-8"?>
<Project ToolsVersion="15.0" Sdk="Microsoft.Docker.Sdk">
  <PropertyGroup Label="Globals">
    <ProjectVersion>2.1</ProjectVersion>
    <DockerTargetOS>Linux</DockerTargetOS>
    <ProjectGuid>7df0179f-a6d6-44d0-ac54-6ddc144b920c</ProjectGuid>
    <DockerLaunchAction>LaunchBrowser</DockerLaunchAction>
    <DockerServiceUrl>{Scheme}://localhost:{ServicePort}/swagger</DockerServiceUrl>
    <DockerServiceName>devops</DockerServiceName>
  </PropertyGroup>
  <ItemGroup>
    <None Include="docker-compose.override.yml">
      <DependentUpon>docker-compose.yml</DependentUpon>
    </None>
    <None Include="docker-compose.yml" />
    <None Include=".dockerignore" />
  </ItemGroup>
</Project>
```



```
2023-10-23 19:57:22 info: Microsoft.Hosting.Lifetime[14]
2023-10-23 19:57:22       Now listening on: http://[::]:80
2023-10-23 19:57:22 info: Microsoft.Hosting.Lifetime[0]
2023-10-23 19:57:22       Application started. Press Ctrl+C to shut down.
2023-10-23 19:57:22 info: Microsoft.Hosting.Lifetime[0]
2023-10-23 19:57:22       Hosting environment: Production
2023-10-23 19:57:22 info: Microsoft.Hosting.Lifetime[0]
2023-10-23 19:57:22       Content root path: /app/
```



| Image | Tag | Image ID | Size |
|---|---|---|---|
| devops | dev | 1d79133ac745 | 208MB |
| devops | latest | 1feb862f56e7 | 212MB |
| devopsassessment | dev | c92cbe665388 | 208MB |
| devopsassign | dev | a0f87c1ef16f | 208MB |
| ghcr.io/rancher-sandbox/rancher-desktop/rdx-proxy | latest | 962665d0abe6 | 5.12MB |
| mcr.microsoft.com/dotnet/aspnet | 6.0 | 0fa00441382d | 208MB |



Select a definition: Devops v1

Devops 1.0 OAS3

https://localhost:60357/swagger/v1/swagger.json

WeatherForecast

GET /WeatherForecast