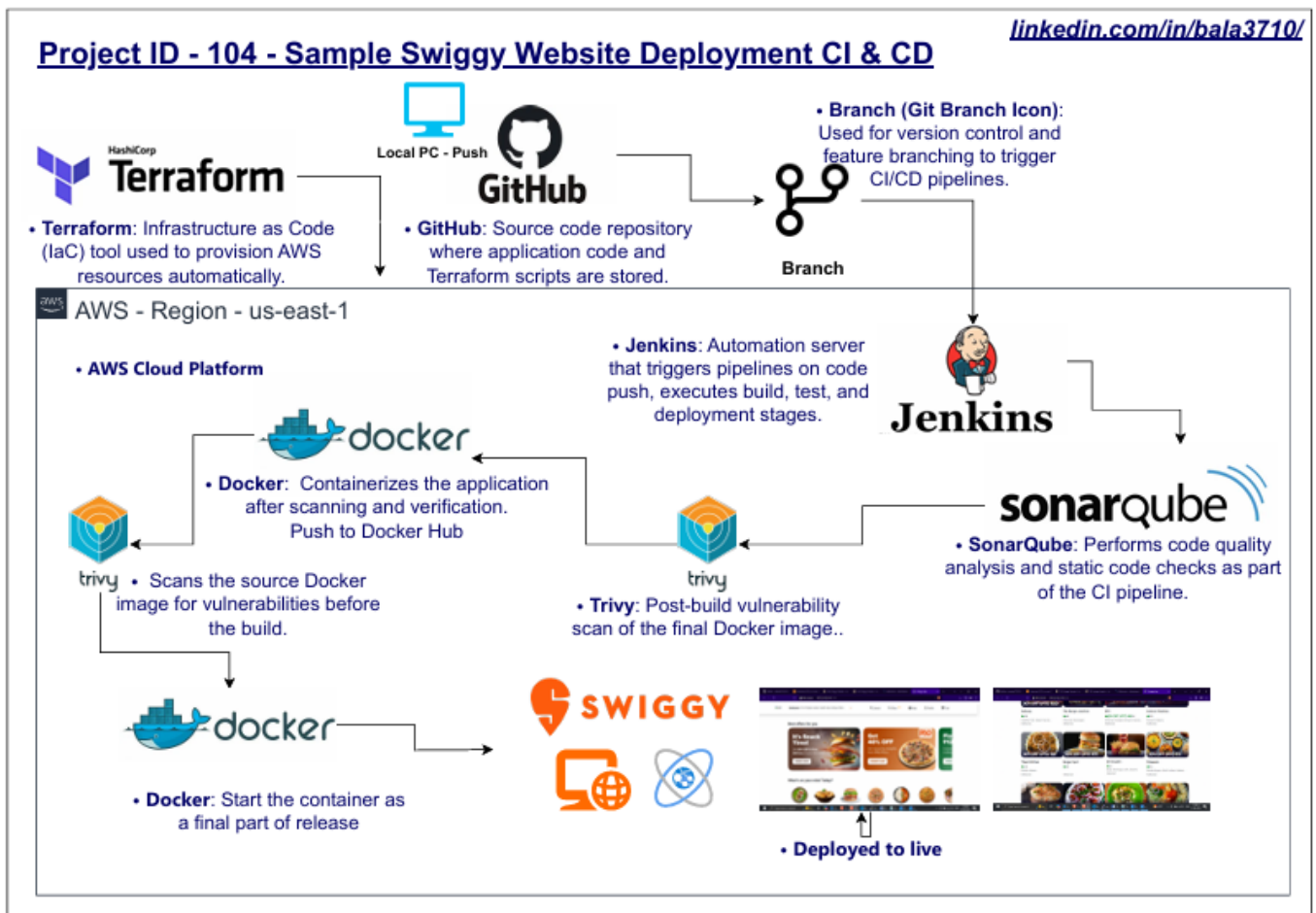


Project ID – 104 - Swiggy Website Deployment using CI/CD Pipeline.

This project demonstrates a complete Continuous Integration and Continuous Deployment (CI/CD) pipeline for deploying a sample Swiggy-like application using modern DevOps tools and AWS infrastructure.

This project is a fork of github.com/KastroVKiran/DevOps-Project-Swiggy. Credits to the original author for their codes & excellent work.



1. Infrastructure Provisioning (Terraform)

- **Terraform** is used as the Infrastructure as Code (IaC) tool to provision the necessary AWS resources in the us-east-1 region automatically.

2. Source Code Management (GitHub)

- Application source code and Terraform scripts are stored in **GitHub**.

- **Git Branching** is used to manage feature branches and trigger CI/CD pipelines on code push events.

3. CI/CD Orchestration (Jenkins)

- **Jenkins** serves as the automation server.
- On each code push, Jenkins triggers pipelines that include:
 - Build
 - Test
 - Code analysis
 - Docker image creation
 - Deployment

4. Code Quality Check (SonarQube)

- **SonarQube** is integrated with Jenkins to perform:
 - Static code analysis
 - Code quality assessments as part of the CI pipeline

5. Security Scanning (Trivy)

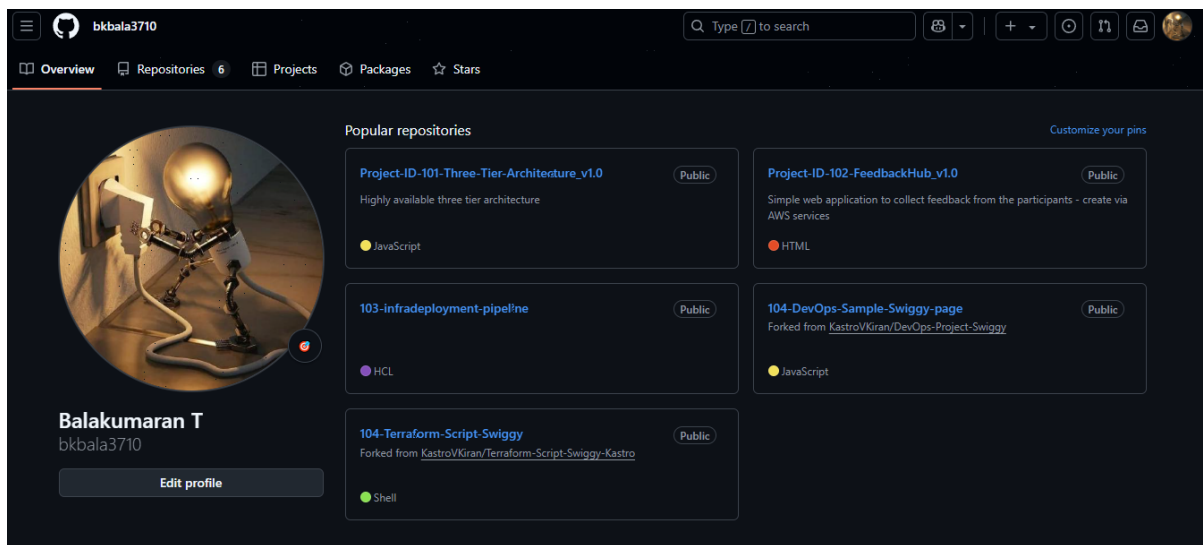
- **Pre-Build:** Trivy scans the base Docker image for vulnerabilities before containerization.
- **Post-Build:** It re-scans the final Docker image for security issues before release.

6. Containerization & Image Management (Docker)

- **Docker** is used to:
 - Containerize the application after successful code verification and scanning
 - Push the container image to Docker Hub
 - Start containers as part of the final deployment phase

7. Application Deployment

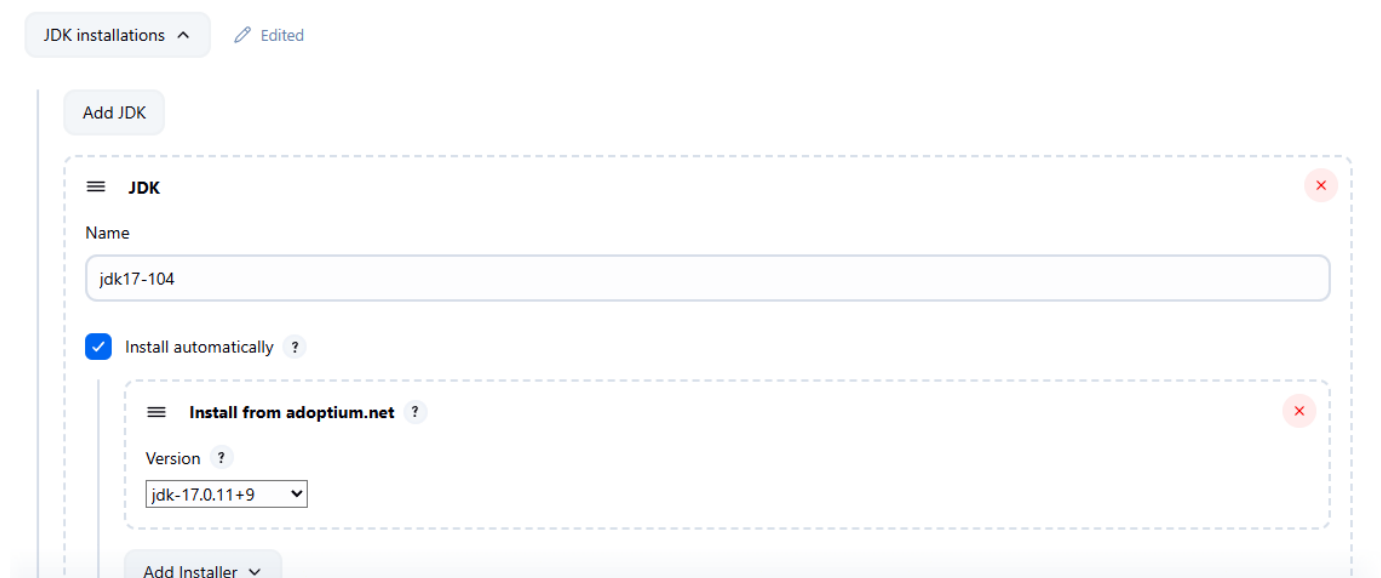
- The Dockerized Swiggy application is deployed to a live environment, hosted on AWS infrastructure.



Tools in Jenkins


1


JDK installations



2

Git installations

 **Git**



Name

Default

Path to Git executable ?

git

☒ Install automatically ?

Add Installer ▾

Add Git ▾

3

SonarQube Scanner installations

SonarQube Scanner installations ^

 Edited

Add SonarQube Scanner

 **SonarQube Scanner**



Name

104-sonar-scanner

☒ Install automatically ?

 **Install from Maven Central**

Version

SonarQube Scanner 6.2.1.4610



4

4

NodeJS installations

NodeJS installations ^

Edited

Add NodeJS

NodeJS

Name

104-node23

☒ Install automatically ?

Install from nodejs.org

Version

NodeJS 23.0.0

5

Dependency-Check installations

Dependency-Check installations ^

Edited

Add Dependency-Check

Dependency-Check

Name

104-DP-Check

☒ Install automatically ?

Install from github.com

Version

dependency-check 10.0.4

6

Docker installations

Docker installations ^

Edited

Add Docker

≡ Docker

Name

104-docker

☒ Install automatically ?

≡ Download from docker.com

Docker version ?

latest

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sonarqube

Projects

Issues

Rules

Quality Profiles

Quality Gates

Administration

?

Search for projects...

A

Tokens of Administrator

Generate Tokens

Name

Expires in

Enter Token Name

30 days

Generate

!

New token "token" has been created. Make sure you copy it now, you won't be able to see it again!

Copy

squ_7f5003b769a4bf2b6d87c850b8322eb141da4552

Name	Type	Project	Last use	Created	Expiration
token	User		Never	June 1, 2025	July 1, 2025

Revoke

Done

Jenkins

?

1

2

Balakumaran T

log out

Dashboard

Manage Jenkins

Credentials

System

Global credentials (unrestricted)

Global credentials (unrestricted)

Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
<div><div>104-sonar-token</div></div>	104-sonar-token	Secret text	104-sonar-token

Icon: S M L

6

Search

1

2

Balakumaran T

log out

Dashboard

Manage Jenkins

Credentials

Credentials

T	P	Store ↓	Domain	ID	Name
		System	(global)	104-sonar-token	104-sonar-token
		System	(global)	104-docker-creds	bkbala3710/***** (104-docker-creds)

Stores scoped to Jenkins

P	Store ↓	Domains
	System	(global)

Icon: S M L

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sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministration

?

Search for projects...

A

Administration

ConfigurationSecurityProjectsSystemMarketplace

Webhooks

Webhooks are used to notify external services when a project analysis is done. An HTTP POST request including a JSON payload is sent to each of the provided URLs. [Learn more in the Webhooks documentation.](#)

Create

Name	URL	Has secret?	Last delivery	Actions
jenkins	http://107.22.152.114:8080/sonarqube-webhook/	No	Never	

SonarQube installations

List of SonarQube installations

Name

104-sonar-server

Server URL

Default is http://localhost:9000

http://107.22.152.114:9000

Server authentication token

SonarQube authentication token. Mandatory when anonymous access is disabled.

104-sonar-token

+ Add

7

The screenshot shows the AWS Management Console interface for the 'Inbound rules' of a security group. The breadcrumb navigation is 'EC2 > Security Groups > sg-041d1ce8083963540 - SG-104-Project'. The left sidebar contains navigation links for Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, Elastic Block Store, and Network & Security. The main content area has tabs for 'Inbound rules', 'Outbound rules', 'Sharing - new', 'VPC associations - new', and 'Tags'. The 'Inbound rules' tab is active, showing a table with 6 rules. The table columns are Rule ID, IP version, Type, Protocol, Port range, and Source. The rules are as follows:

Rule ID	IP version	Type	Protocol	Port range	Source
pa8d06d	IPv4	HTTP	TCP	80	0.0.0.0/0
ff0c7ed	IPv4	Custom TCP	TCP	8080	0.0.0.0/0
ee006ccc	IPv4	Custom TCP	TCP	3000	0.0.0.0/0
3dc836e	IPv4	HTTPS	TCP	443	0.0.0.0/0
1b02333	IPv4	Custom TCP	TCP	9000	0.0.0.0/0
34c1337	IPv4	SSH	TCP	22	0.0.0.0/0

The screenshot shows the 'Security Groups' page in the AWS Management Console. The breadcrumb navigation is 'EC2 > Security Groups'. The left sidebar is the same as the previous screenshot. The main content area has tabs for 'Security Groups (1) Info', 'Actions', 'Export security groups to CSV', and 'Create security group'. The 'Security Groups (1) Info' tab is active, showing a search bar and a table with 1 security group. The table columns are Name, Security group ID, Security group name, and VPC ID. The security group is 'SG-104-Project' with ID 'sg-041d1ce8083963540' and VPC ID 'vpc-08eeca0db9ff51f4f'.

Name	Security group ID	Security group name	VPC ID
SG-104-Project	sg-041d1ce8083963540	SG-104-Project	vpc-08eeca0db9ff51f4f

The screenshot shows the 'Instances' page in the AWS Management Console. The breadcrumb navigation is 'EC2 > Instances'. The left sidebar is the same as the previous screenshots. The main content area has tabs for 'Instances (1) Info', 'Connect', 'Instance state', 'Actions', and 'Launch instances'. The 'Instances (1) Info' tab is active, showing a search bar and a table with 1 instance. The table columns are Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. The instance is 'SG-104-Projec...' with ID 'i-01e65d269782464ac', state 'Running', type 't2.large', and availability 'us-east-1b'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
SG-104-Projec...	i-01e65d269782464ac	Running	t2.large	2/2 checks passed	View alarms +	us-east-1b

The screenshot shows the Jenkins web interface for a pipeline named '104-Swiggy-Sample'. The top navigation bar includes links to the Dashboard, the specific pipeline, and build #8. The main content area displays the status of build #8, which is successful (indicated by a green checkmark). The build was started by user 'Balakumaran T' on June 1, 2025, at 12:36:22 PM. The console output shows the build duration and total time. The build was triggered by a Git commit to the 'refs/remotes/origin/master' branch. The repository is 'https://github.com/bkbala3710/104-DevOps-Sample-Swiggy-page.git'. The build steps include 'Changes', 'Console Output', 'Edit Build Information', 'Delete build #8', 'Timings', 'Git Build Data', 'Pipeline Overview', 'Restart from Stage', 'Replay', 'Pipeline Steps', 'Workspaces', and 'Previous Build'.

The screenshot shows the SonarQube web interface for the 'Swiggy' project. The top navigation bar includes links to Projects, Issues, Rules, Quality Profiles, Quality Gates, and Administration. The main content area displays the 'Swiggy' project details, including the 'main' branch and the 'Last analysis of this Branch had 1 warning' message. The 'QUALITY GATE STATUS' section shows 'Passed' with 'All conditions passed.' The 'MEASURES' section shows 'New Code' and 'Overall Code' metrics. The 'New Code' section shows '0 New Bugs', '0 New Vulnerabilities', and '0 New Security Hotspots'. The 'Overall Code' section shows 'Reliability A', 'Security A', and 'Security Review A'.

GitHub - bkbala3710/104

Instances | EC2 | us-east-1

104-Swiggy-Sample #8 C

104-Swiggy-Sample - Jeni

Projects

Swiggy App

107.22.152.114:9000/projects

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sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministration

Search for projects...

My FavoritesAll

Search by project name or key

Create Project

1 project(s)

Perspective: Overall Status

Sort by: Name

SwiggyPassed

Last analysis: 12 minutes ago

Bugs0

Vulnerabilities0

Hotspots Reviewed0.0%

Code Smells0

Coverage0.0%

Duplications0.0%

Lines801

JavaScript...

1 of 1 shown

Embedded database should be used for evaluation purposes only
The embedded database will not scale, it will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database engine.

SonarQube™ technology is powered by SonarSource SA
Community Edition - v9.9.8 (build 100196) - [LGPL v3](#) - [Community](#) - [Documentation](#) - [Plugins](#) - [Web API](#)

Type here to search

GitHub - bkbala3710/104

Instances | EC2 | us-east-1

104-Swiggy-Sample

104-Swiggy-Sample - Jeni

Projects

Swiggy App

107.22.152.114:8080/job/104-Swiggy-Sample/

Jenkins

Search

1

2

Balakumaran T

log out

Dashboard > 104-Swiggy-Sample >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

SonarQube

Stages

Rename

Pipeline Syntax

104-Swiggy-Sample

Add description

Stage View

Average stage times (full run time: ~4min 42s)

	Declarative: Tool Install	clean workspace	Checkout from Git	Sonarqube Analysis	quality gate	Install Dependencies	TRIVY FS SCAN	Doc Build Pus
#6 Jun 01 18:06 No Changes	154ms	285ms	810ms	17s	386ms	17s	2s	2min
#7 Jun 01 17:57 1 commit	157ms	309ms	891ms	18s	373ms (paused for 2s)	18s	2s	2min
#6 Jun 01 17:45 No Changes	150ms	225ms	750ms	16s	402ms (paused for 1s)	17s	2s	2min

Type here to search

Dashboard > 104-Swiggy-Sample

Rename
Pipeline Syntax

Builds

Filter

Today

- #8 12:36 PM
- #7 12:27 PM
- #6 12:15 PM
- #5 12:10 PM
- #4 11:36 AM
- #3 11:30 AM
- #2 10:58 AM
- #1 10:19 AM

Build	Changes	Duration	Test Results	Code Coverage	Static Analysis	Security Scan	Deployment	Overall Status	
#7	Jun 01 17:57 1 commit	157ms	309ms	891ms	18s	373ms	18s	2s	2min
#6	Jun 01 17:45 No Changes	150ms	275ms	750ms	16s	402ms	17s	2s	2min

SonarQube Quality Gate

Swiggy **Passed**

server-side processing: **Success**

Permalinks

- Last build (#8), 11 min ago
- Last stable build (#8), 11 min ago
- Last successful build (#8), 11 min ago
- Last failed build (#7), 20 min ago
- Last unsuccessful build (#7), 20 min ago
- Last completed build (#8), 11 min ago

Dashboard > 104-Swiggy-Sample > #8

```
[Pipeline] envVarsForTool
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ docker run -d --name swiggy -p 3000:3000 bkbala3710/swiggy:latest
c515c10b0838e7eb2365fadb5a343ffea99b5698572bd9f6abc191a9f9ff0bec
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

REST API Jenkins 2.504.2

GitHub - bkbala3710/104 Instances | EC2 | us-east-1 104-Swiggy-Sample - Jeni 104-Swiggy-Sample - Jeni Webhooks - Administratic Swiggy App

Not secure 107.22.152.114:3000

Amalapuram 10-34, Shankar-matam Veedhi, Near Godavari Delta...

Search Offers New Help Profile Cart

Best offers for you

It's Snack Time!
Get **50% OFF & Free Delivery** on your first order.
ORDER NOW

Get 40% OFF
On heavenly delights from P60 Pizza.
ORDER NOW

Flat ₹12
Celebrate Coffee
ORDE

What's on your mind Today?

Icons representing various food items: a bowl of food, a burger, a pizza, a bowl of rice, a bowl of noodles, and a bowl of soup.

Windows taskbar: Type here to search, 17:39:03, 01-06-2025

GitHub - bkbala3710/104 Instances | EC2 | us-east-1 104-Swiggy-Sample - Jeni 104-Swiggy-Sample - Jeni Webhooks - Administratic Swiggy App

Not secure 107.22.152.114:3000

50% OFF UPTO ₹100

Subway
★3.9
Healthy Food, Salad, Snacks,...
Kakkanad

The Burger Junction
★4.5
American, Beverages
Kakkanad

KFC
★20% OFF UPTO ₹504.1
American, Burgers, Biryani, Snacks,...
Kakkanad

Amma's Pastries
★3.9
Desserts, Bakery
Kakkanad

20% OFF UPTO ₹50

30% OFF UPTO ₹75

30% OFF UPTO ₹75

30% OFF UPTO ₹75

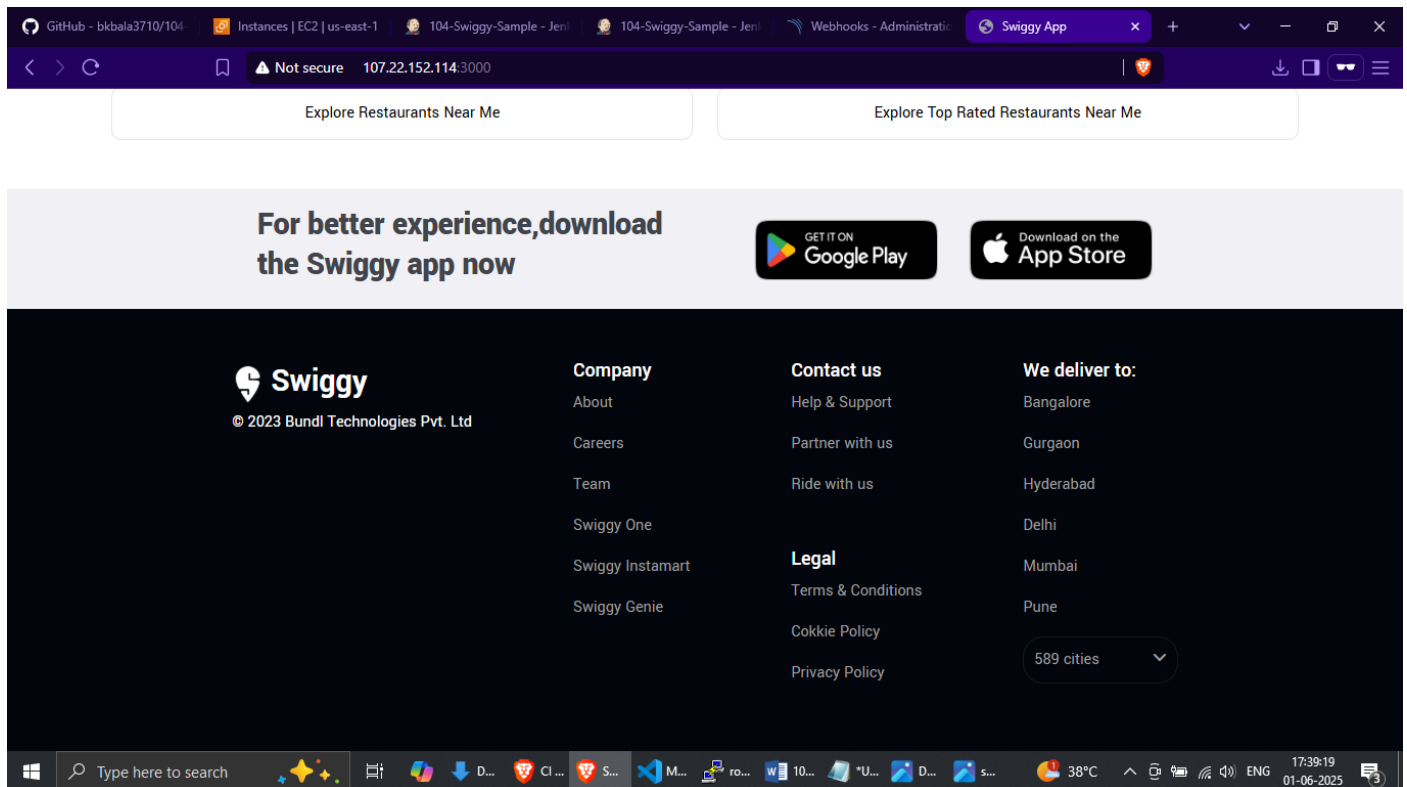
Thaal Kitchen
★3.9
Kerala, Arabian
Kakkanad

Burger Spot
★4.5
Kakkanad

Mc Donald's
★4.3
Burger, Beverages, Cafe, Desserts
Kakkanad

Palaaaram
★4.2
Kerala, Biryani, North Indian, Arabian,...
Kakkanad

Windows taskbar: Type here to search, 38°C, 17:39:12, 01-06-2025



This CI/CD pipeline automates the complete lifecycle of deploying a Swiggy-like application, from infrastructure provisioning to live deployment. By integrating tools like Terraform, GitHub, Jenkins, SonarQube, Trivy, and Docker, it ensures code quality, security, and seamless delivery. This setup enhances development efficiency, reduces manual errors, and accelerates the release process.

Ref: <https://www.youtube.com/watch?v=x55z7rk0NAU&t=1221s> - Learn With KASTRO