

Name: **Chinnakotla Jagannath**

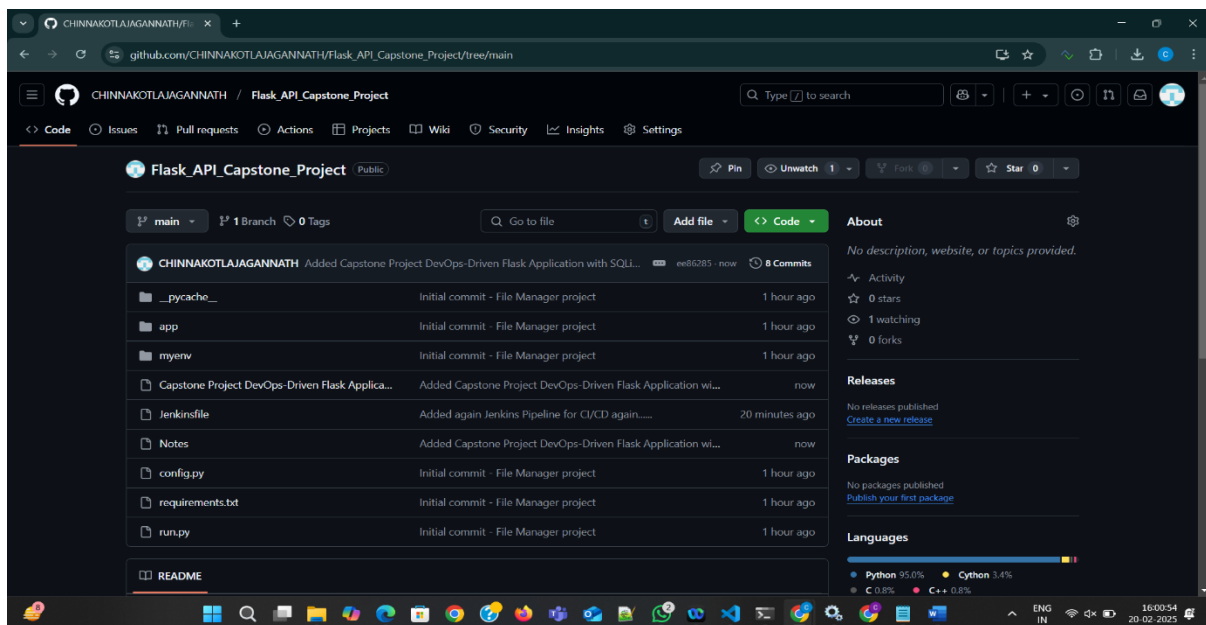
## Capstone Project: *DevOps-Driven Flask Application with SQLite and Azure Deployment*

### Objectives

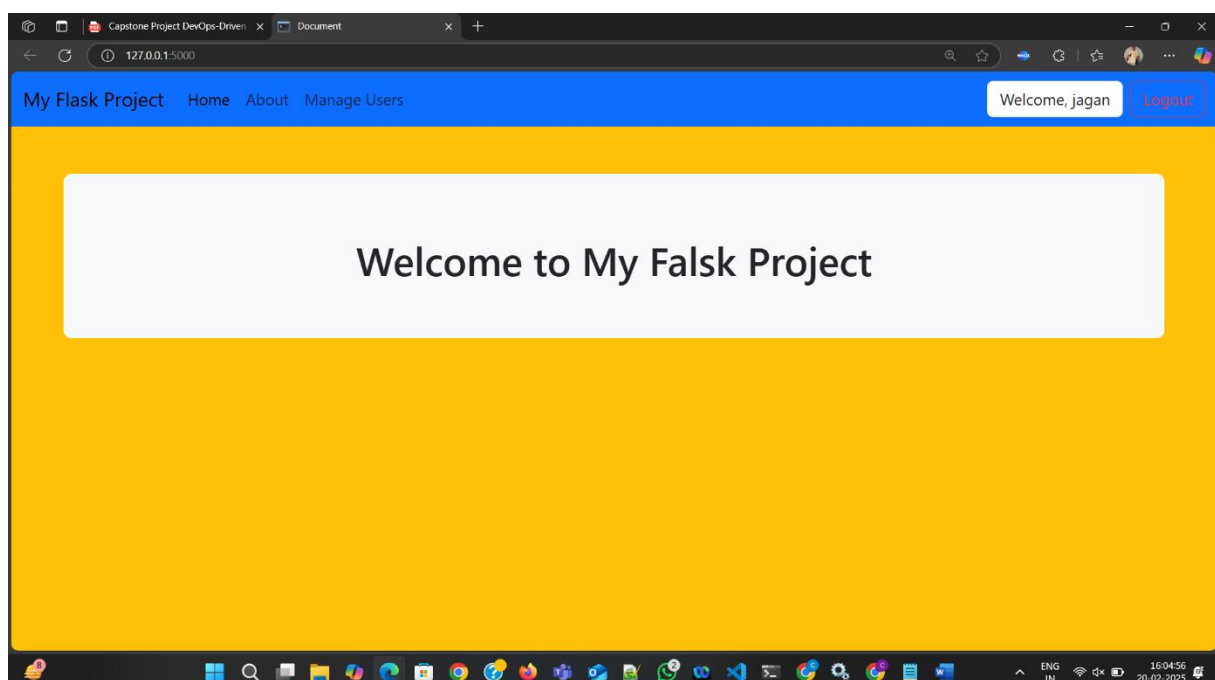
#### 1. Develop a Flask API

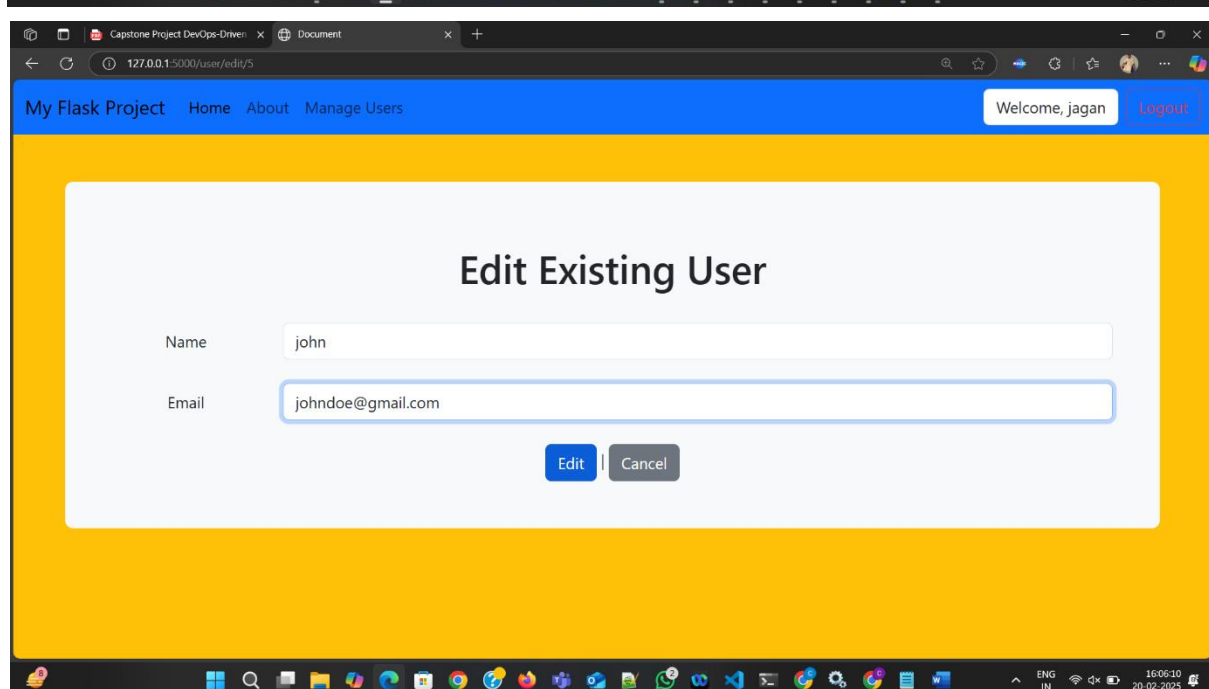
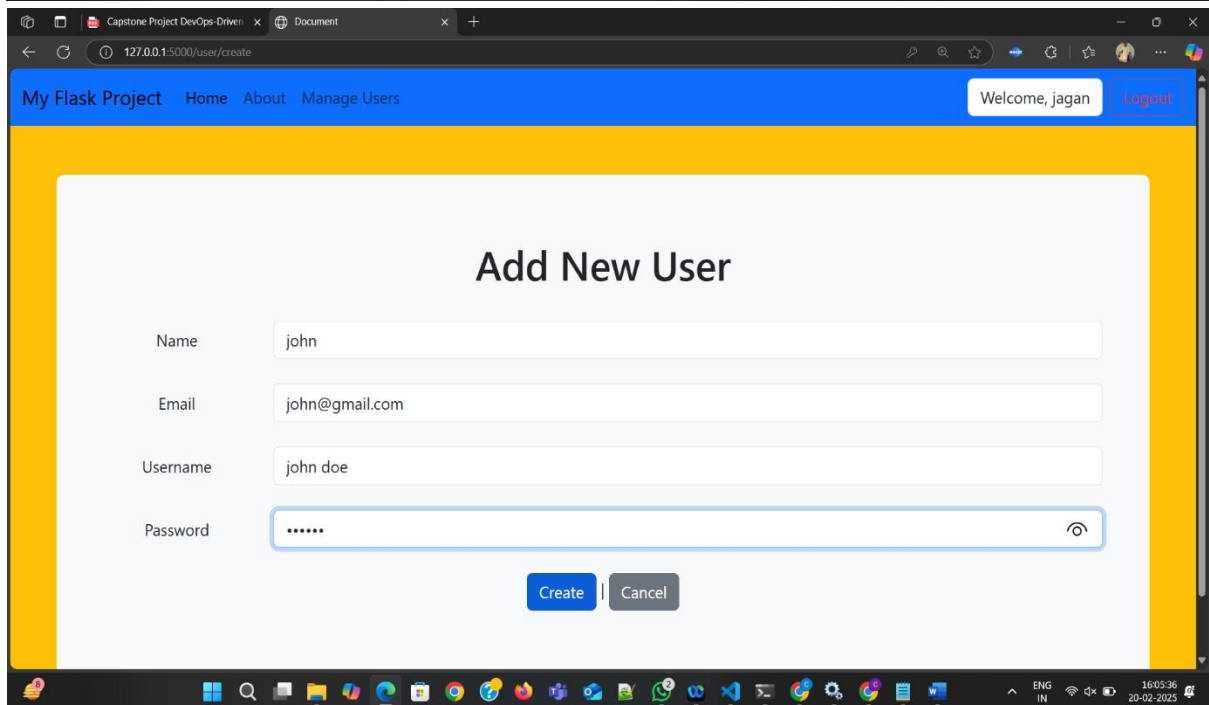
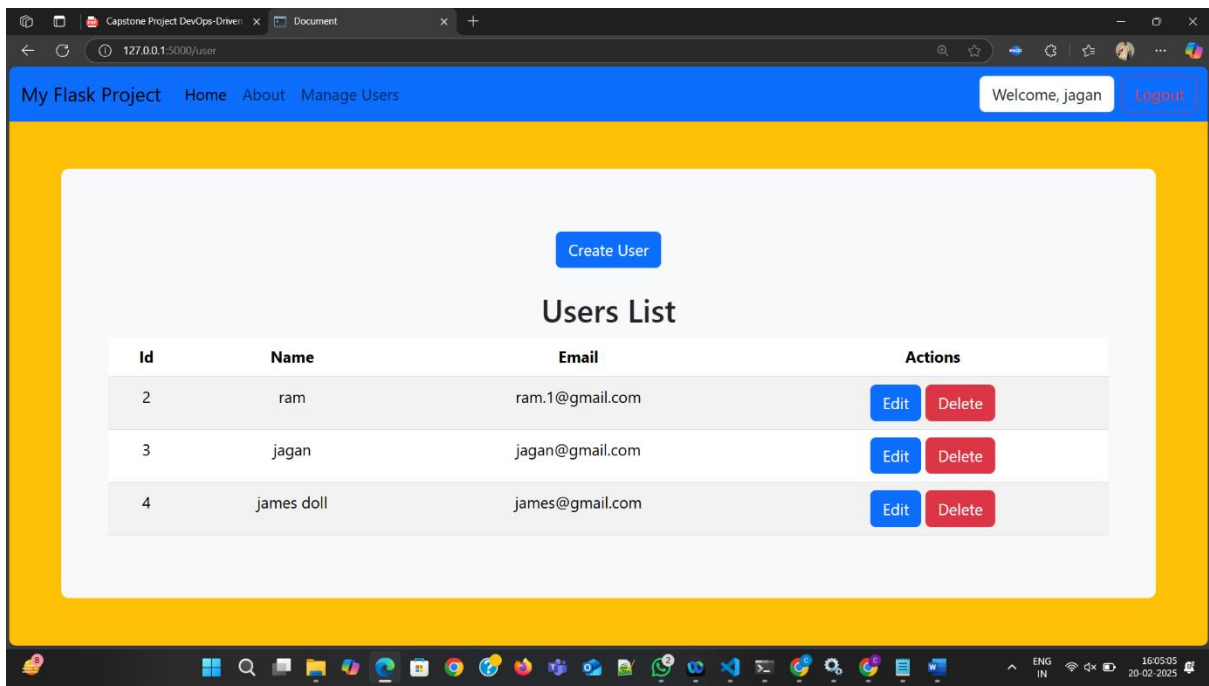
- Design a RESTful API that allows users to perform CRUD operations.
- Implement authentication and error handling mechanisms.

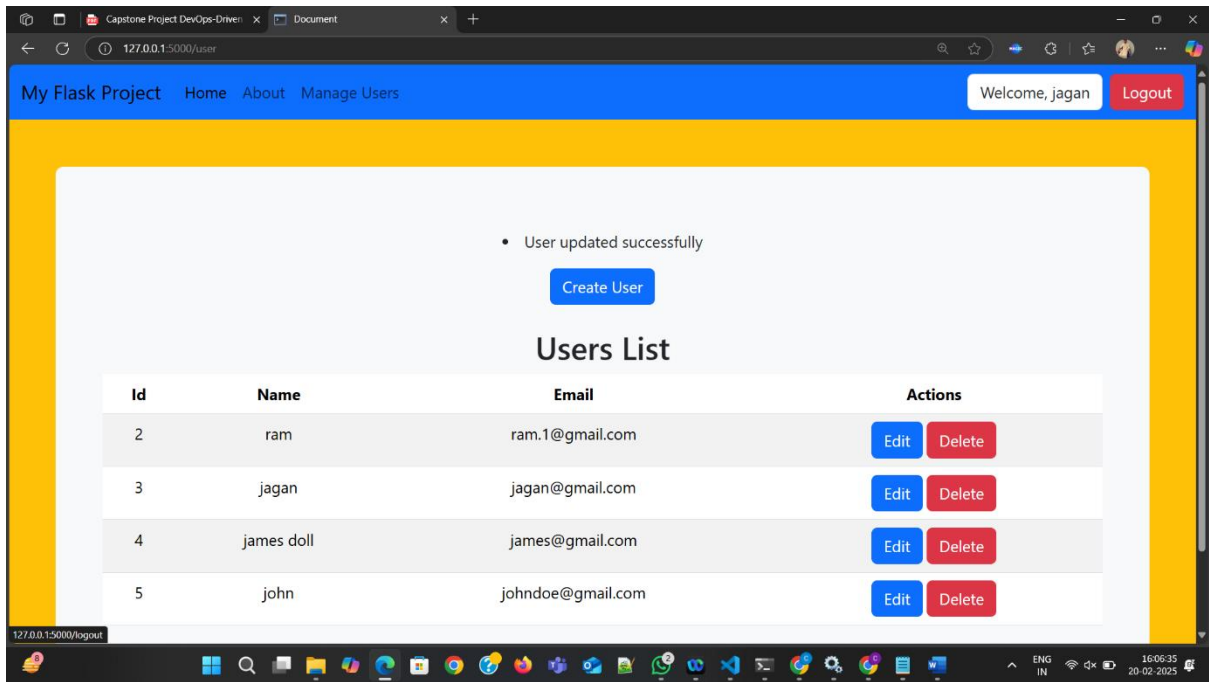
Github\_Link: [https://github.com/CHINNAKOTLAJAGANNATH/Flask\\_API\\_Capstone\\_Project.git](https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git)



Run: Running on <http://127.0.0.1:5000>







## 2. Integrate an SQLite Database

- Create and manage a database using SQLite.
- Store and retrieve structured data efficiently.

```

C:\Users\JAGANNATH\db>sqlite3 mydb.db
SQLite version 3.46.1 2024-08-13 09:16:08 (UTF-16 console I/O)
Enter ".help" for usage hints.
sqlite>
sqlite> .tables
STUDENT      TEACHER      UserDetails  category      product      user
sqlite>
sqlite> select * from user;
2|ram|ram.1@gmail.com|ram|123456
3|jagan|jagan@gmail.com|jagan|123456
4|james doll|james@gmail.com|james|123456
sqlite>
sqlite> |

```

## 3. Automate DevOps Pipeline Using Jenkins

- Set up continuous integration and deployment (CI/CD) pipelines.
- Automate building, testing, and deploying the Flask application.

FlaskAPI\_CI\_CD #11 Console [j] x +

localhost:8080/jenkins/job/FlaskAPI\_CI\_CD/11/console

Jenkins Chinnakotla Jagannath log out

Dashboard > FlaskAPI\_CI\_CD > #11

Status  
Changes  
Console Output  
Edit Build Information  
Delete build #11  
Timings  
Git Build Data  
Pipeline Overview  
Pipeline Console  
Restart from Stage  
Replay  
Pipeline Steps  
Workspaces  
Previous Build

Console Output

Download Copy View as plain text

```
Started by user Chinnakotla Jagannath
Obtained Jenkinsfile from git https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in D:\new_jenkins_home\workspace\FlaskAPI_CI_CD
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
The recommended git tool is: git.exe
No credentials specified
> git.exe rev-parse --resolve-git-dir D:\new_jenkins_home\workspace\FlaskAPI_CI_CD\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git # timeout=10
Fetching upstream changes from https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git
> git.exe --version # timeout=10
> git --version # 'git version 2.46.1.windows.1'
> git.exe fetch --tags --force --progress -- https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/main" [commit] # timeout=10
Checking out Revision 461ea5ab46ef716cdd4234d20caed0856558b673 (refs/remotes/origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 461ea5ab46ef716cdd4234d20caed0856558b673 # timeout=10
Commit message: "Added again Jenkins Pipeline for CI/CD again....."
> git.exe rev-list --no-walk 240b70a43d93095808ec2fc26430a7391b035594 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Clone Repository)
[Pipeline] git
The recommended git tool is: git.exe
using credential cred-jenkins
> git.exe rev-parse --resolve-git-dir D:\new_jenkins_home\workspace\FlaskAPI_CI_CD\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git # timeout=10
Fetching upstream changes from https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git
> git.exe --version # timeout=10
> git --version # 'git version 2.46.1.windows.1'
using GIT_ASKPASS to set credentials
> git.exe fetch --tags --force --progress -- https://github.com/CHINNAKOTLAJAGANNATH/Flask_API_Capstone_Project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/main" [commit] # timeout=10
Checking out Revision 461ea5ab46ef716cdd4234d20caed0856558b673 (refs/remotes/origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 461ea5ab46ef716cdd4234d20caed0856558b673 # timeout=10
> git.exe branch -a -v --no-abbrev # timeout=10
> git.exe checkout -b main 461ea5ab46ef716cdd4234d20caed0856558b673 # timeout=10
Commit message: "Added again Jenkins Pipeline for CI/CD again....."
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

FlaskAPI\_CI\_CD #11 Console [j] x +

localhost:8080/jenkins/job/FlaskAPI\_CI\_CD/11/console

Dashboard > FlaskAPI\_CI\_CD > #11

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[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

https://github.com/CHINNAKOTLAJAGANNATH/Flask\_API\_Capstone\_Project.git

REST API Jenkins 2.492.1