

# Module : 06

## Jenkins Exercise

### Name : Chinnakotla Jagannath

#### Exercise 3: Freestyle Job - Flask Application Deployment

**1. Objective:** Automate the deployment of a Flask application.

**2. Steps:**

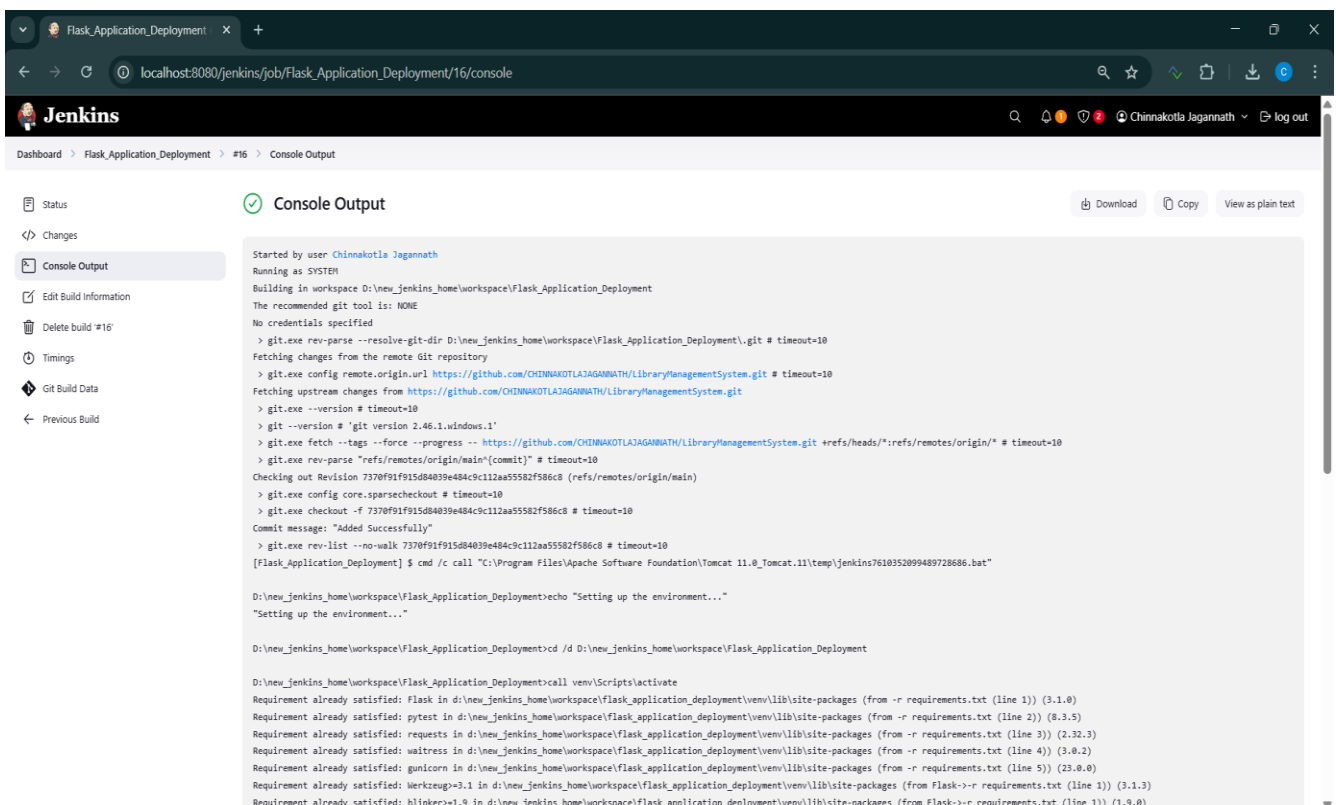
- Create a Freestyle Job.
- Configure the job to:
  - Pull the Flask application repository from GitHub.
  - Set up a virtual environment using Python:

```
python -m venv venv .\venv\Scripts\activate pip install -r requirements.txt
```
  - Start the Flask development server.
- Add a post-build action to verify the server is running (e.g., using curl or a similar tool to hit a test endpoint).

**3. Task:** Test the application deployment by accessing it via localhost.

#### Flask Project GitHub Repo Link:

<https://github.com/CHINNAKOTLAJAGANNATH/LibraryManagementSystem>



The screenshot shows the Jenkins web interface for a job named 'Flask\_Application\_Deployment'. The 'Console Output' tab is selected, displaying the following log:

```
Started by user Chinnakotla Jagannath
Running as SYSTEM
Building in workspace D:\new_jenkins_home\workspace\Flask_Application_Deployment
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir D:\new_jenkins_home\workspace\Flask_Application_Deployment\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/CHINNAKOTLAJAGANNATH/LibraryManagementSystem.git # timeout=10
Fetching upstream changes from https://github.com/CHINNAKOTLAJAGANNATH/LibraryManagementSystem.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/LibraryManagementSystem.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse 'refs/remotes/origin/main' # timeout=10
Checking out Revision 7370f91f915d84039e484c9c112aa55582f586c8 (refs/remotes/origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 7370f91f915d84039e484c9c112aa55582f586c8 # timeout=10
Commit message: "Added Successfully"
> git.exe rev-list --no-walk 7370f91f915d84039e484c9c112aa55582f586c8 # timeout=10
[Flask_Application_Deployment] $ cmd /c call "C:\Program Files\Apache Software Foundation\Tomcat 11.0\Tomcat.11\temp\jenkins7610352099489728686.bat"

D:\new_jenkins_home\workspace\Flask_Application_Deployment>echo "Setting up the environment..."
"Setting up the environment..."

D:\new_jenkins_home\workspace\Flask_Application_Deployment>cd /d D:\new_jenkins_home\workspace\Flask_Application_Deployment

D:\new_jenkins_home\workspace\Flask_Application_Deployment>call venv\Scripts\activate
Requirement already satisfied: Flask in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from -r requirements.txt (line 1)) (3.1.0)
Requirement already satisfied: pytest in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from -r requirements.txt (line 2)) (8.3.5)
Requirement already satisfied: requests in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from -r requirements.txt (line 3)) (2.32.3)
Requirement already satisfied: waitress in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from -r requirements.txt (line 4)) (3.0.2)
Requirement already satisfied: gunicorn in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from -r requirements.txt (line 5)) (23.0.0)
Requirement already satisfied: Werkzeug>=3.1 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->-r requirements.txt (line 1)) (3.1.3)
Requirement already satisfied: blinker>=1.9 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->-r requirements.txt (line 1)) (1.9.0)
```

Flask\_Application\_Deployment

localhost:8080/jenkins/job/Flask\_Application\_Deployment/16/console

Dashboard > Flask\_Application\_Deployment > #16 > Console Output

```
Requirement already satisfied: Werkzeug>=3.1 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->r requirements.txt (line 1)) (3.1.3)
Requirement already satisfied: blinker>=1.9 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->r requirements.txt (line 1)) (1.9.0)
Requirement already satisfied: click>=8.1.3 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->r requirements.txt (line 1)) (8.1.8)
Requirement already satisfied: Jinja2>=3.1.2 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->r requirements.txt (line 1)) (3.1.6)
Requirement already satisfied: itsdangerous>=2.2 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Flask->r requirements.txt (line 1)) (2.2.0)
Requirement already satisfied: tomli>=1 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (2.2.1)
Requirement already satisfied: iniconfig in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (2.0.0)
Requirement already satisfied: exceptiongroup>=1.0.0rc8 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (1.2.2)
Requirement already satisfied: pluggy<2,>=1.5 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (1.5.0)
Requirement already satisfied: packaging in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (24.2)
Requirement already satisfied: colorama in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from pytest->r requirements.txt (line 2)) (0.4.6)
Requirement already satisfied: urllib3<3,>=1.21.1 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from requests->r requirements.txt (line 3)) (2.3.0)
Requirement already satisfied: idna<4,>=2.5 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from requests->r requirements.txt (line 3)) (3.10)
Requirement already satisfied: charset-normalizer<4,>=2 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from requests->r requirements.txt (line 3)) (3.4.1)
Requirement already satisfied: certifi>=2017.4.17 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from requests->r requirements.txt (line 3)) (2025.1.31)
Requirement already satisfied: MarkupSafe>=2.0 in d:\new_jenkins_home\workspace\Flask_Application_Deployment\venv\lib\site-packages (from Jinja2>=3.1.2->Flask->r requirements.txt (line 1)) (3.0.2)

[notice] A new release of pip available: 22.3.1 -> 25.0.1
[notice] To update, run: python.exe -m pip install --upgrade pip
ERROR: Input redirection is not supported, exiting the process immediately.
"Verifying Flask App Routes..."
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 532-077-364
127.0.0.1 - - [10/Mar/2025 23:18:33] "GET / HTTP/1.1" 200 -
Retrieved HTTP Code: 200
"Flask application is running successfully!"
Process leaked file descriptors. See https://www.jenkins.io/redirect/troubleshooting/process-leaked-file-descriptors for more information
Finished: SUCCESS
```

REST API Jenkins 2.492.1