Jenkins Exercises

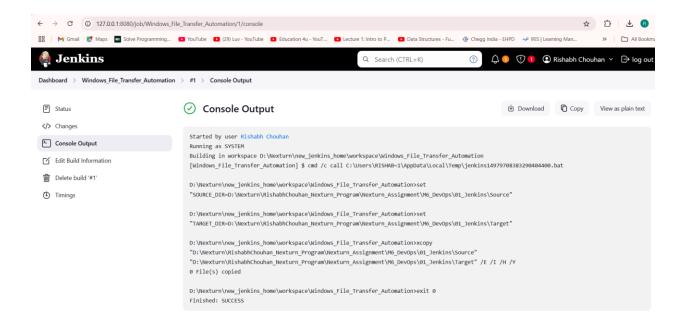## Exercise 1: Freestyle Job - Windows File Transfer Automation

1. **Objective:** Automate file transfer between two directories on a Windows machine.

2. **Steps:**

   - Create a Freestyle Job in Jenkins.

   - **Configure the job to execute a Windows batch command:**

   ```
   xcopy C:\source-directory C:\target-directory /E /I /H /Y
   ```

   - Add a post-build action to check the success of the transfer using a custom message.

3. **Task:** Test the job by placing some files in the source directory and verifying they are transferred to the target directory.

Jenkins

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Dashboard > Windows_File_Transfer_Automation > #1 > Console Output

Status
Changes
Console Output
Edit Build Information
Delete build '#1'
Timings

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```
Started by user Rishabh Chouhan
Running as SYSTEM
Building in workspace D:\Nexturn\new_jenkins_home\workspace\Windows_File_Transfer_Automation
[Windows_File_Transfer_Automation] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins14979708383290404400.bat

D:\Nexturn\new_jenkins_home\workspace\Windows_File_Transfer_Automation>set
"SOURCE_DIR=D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Source"

D:\Nexturn\new_jenkins_home\workspace\Windows_File_Transfer_Automation>set
"TARGET_DIR=D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Target"

D:\Nexturn\new_jenkins_home\workspace\Windows_File_Transfer_Automation>xcopy
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Source"
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Target" /E /I /H /Y
0 File(s) copied

D:\Nexturn\new_jenkins_home\workspace\Windows_File_Transfer_Automation>exit 0
Finished: SUCCESS
```

Exercise 2: Freestyle Job - Build and Deploy a JavaScript Project

1. **Objective:** Build and deploy a JavaScript-based web project.

2. **Steps:**

   ○ Create a Freestyle Job.

   ○ **Configure the job to:**

      ▪ Clone a JavaScript repository (e.g., a React project) from GitHub.

      ▪ Run npm install to install dependencies.

      ▪ Build the project using npm run build.

      ▪ Copy the build folder to a deployment directory using a Windows batch command or PowerShell.

   ○ Archive the build artifacts for future reference.

3. **Task:** Verify the deployment by accessing the web application from the deployment directory.

Jenkins

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- Status
- </> Changes
- Console Output
- Edit Build Information
- Delete build '#3'
- Timings
- Git Build Data
- ← Previous Build

Console Output

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```
15:56:02 Started by user Rishabh Chouhan
15:56:02 Running as SYSTEM
15:56:02 Building in workspace D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project
15:56:02 [WS-CLEANUP] Deleting project workspace...
15:56:02 [WS-CLEANUP] Deferred wipeout is used...
15:56:03 [WS-CLEANUP] Done
15:56:03 The recommended git tool is: NONE
15:56:03 No credentials specified
15:56:03 Cloning the remote Git repository
15:56:03 Cloning repository https://github.com/Rishabh28n/Basic_react
15:56:03  > git.exe init D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project # timeout=10
15:56:03 Fetching upstream changes from https://github.com/Rishabh28n/Basic_react
15:56:03  > git.exe --version # timeout=10
15:56:03  > git --version # 'git version 2.39.0.windows.2'
15:56:03  > git.exe fetch --tags --force --progress -- https://github.com/Rishabh28n/Basic_react +refs/heads/*:refs/remotes/origin/* # timeout=10
15:56:12  > git.exe config remote.origin.url https://github.com/Rishabh28n/Basic_react # timeout=10
15:56:12  > git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
15:56:12 Avoid second fetch
15:56:12  > git.exe rev-parse "refs/remotes/origin/main^{commit}" # timeout=10
15:56:12 Checking out Revision a89abb1c52ffbf9247dddfdd7ee6b132dc42f89e (refs/remotes/origin/main)
```

Timestamps   View as plain text ∨

- System clock time
- ☑ Use browser timezone
- Elapsed time
- None

Timestamps   View as plain text ∨

- System clock time
- ☑ Use browser timezone
- Elapsed time
- None

```
15:56:12  > git.exe config core.sparsecheckout # timeout=10
15:56:13  > git.exe checkout -f a89abb1c52ffbf9247dddfdd7ee6b132dc42f89e # timeout=10
15:56:13 Commit message: "React Basic files"
15:56:13  > git.exe rev-list --no-walk a89abb1c52ffbf9247dddfdd7ee6b132dc42f89e # timeout=10
15:56:13 [Build_Deploy_JavaScript_Project] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins6685415456862344355.bat
15:56:13
15:56:13 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>echo "Installing dependencies..."
15:56:13 "Installing dependencies..."
15:56:13
15:56:13 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>npm install
15:56:18 added 269 packages, and audited 270 packages in 4s
15:56:18
15:56:18 97 packages are looking for funding
15:56:18   run `npm fund` for details
15:56:18
15:56:18 4 vulnerabilities (1 moderate, 3 high)
15:56:18
15:56:18 To address all issues, run:
15:56:18   npm audit fix
15:56:18
15:56:18 Run `npm audit` for details.
15:56:18 [Build_Deploy_JavaScript_Project] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins13420131158542748311.bat
15:56:18
15:56:18 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>echo "Building project..."
15:56:18 "Building project..."
15:56:18
15:56:18 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>npm run build
```

Timestamps   View as plain text ∨

◉ System clock time
  ☑ Use browser timezone
◯ Elapsed time
◯ None

```
15:56:19 > basic-react-app@0.0.0 build
15:56:19 > vite build
15:56:19
15:56:20 ▒[36mvite v5.0.10 ▒[32mbuilding for production...▒[36m▒[39m
15:56:20 transforming...
15:56:21 ▒[32m▒▒[39m 34 modules transformed.
15:56:21 rendering chunks...
15:56:21 computing gzip size...
15:56:21 ▒[2mdist/▒[22m▒[32mindex.html                   ▒[39m▒[1m▒[2m  0.47 kB▒[22m▒[1m▒[22m▒[2m | gzip:  0.30 kB▒[22m
15:56:21 ▒[2mdist/▒[22m▒[32massets/react-h3aPdYU7.svg    ▒[39m▒[1m▒[2m  4.13 kB▒[22m▒[1m▒[22m▒[2m | gzip:  2.14 kB▒[22m
15:56:21 ▒[2mdist/▒[22m▒[35massets/index-4sK4E3Wk.css    ▒[39m▒[1m▒[2m  1.39 kB▒[22m▒[1m▒[22m▒[2m | gzip:  0.72 kB▒[22m
15:56:21 ▒[2mdist/▒[22m▒[36massets/index-apIUfoim.js    ▒[39m▒[1m▒[2m143.43 kB▒[22m▒[1m▒[22m▒[2m | gzip: 46.11 kB▒[22m
15:56:21 ▒[32m▒ built in 902ms▒[39m
15:56:21 [Build_Deploy_JavaScript_Project] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins6913624851189648478.bat
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>echo "Deploying to target directory..."
15:56:21 "Deploying to target directory..."
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>IF NOT EXIST
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy" (mkdir
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy" )
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>xcopy /E /I /Y "dist\*"
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy"
15:56:21 dist\index.html
15:56:21 dist\vite.svg
15:56:21 dist\assets\index-4sK4E3Wk.css
15:56:21 dist\assets\index-apIUfoim.js
```

Timestamps   View as plain text ∨

◉ System clock time
  ☑ Use browser timezone
◯ Elapsed time
◯ None

```
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>IF NOT EXIST
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy" (mkdir
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy" )
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>xcopy /E /I /Y "dist\*"
"D:\Nexturn\RishabhChouhan_Nexturn_Program\Nexturn_Assignment\M6_DevOps\01_Jenkins\Deploy"
15:56:21 dist\index.html
15:56:21 dist\vite.svg
15:56:21 dist\assets\index-4sK4E3Wk.css
15:56:21 dist\assets\index-apIUfoim.js
15:56:21 dist\assets\react-h3aPdYU7.svg
15:56:21 5 File(s) copied
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>IF 0 NEQ 0 (
15:56:21 echo "Deployment failed"
15:56:21  exit /b 0
15:56:21 )
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>echo "Deployment completed successfully"
15:56:21 "Deployment completed successfully"
15:56:21
15:56:21 D:\Nexturn\new_jenkins_home\workspace\Build_Deploy_JavaScript_Project>exit 0
15:56:21 Finished: SUCCESS
```

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).

← → C ⊙ 127.0.0.1:8080/job/Flask_Application_Devlopment/8/console ☆ ⊡ | ● R ⋮

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Jenkins

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Dashboard > Flask_Application_Devlopment > #8 > Console Output

✅ **Console Output**

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```
Started by user Rishabh Chouhan
Running as SYSTEM
Building in workspace D:\Nexturn\new_jenkins_home\workspace\Flask_Application_Devlopment
The recommended git tool is: NONE
using credential 657c2f3d-d360-4984-ba4d-f79800c43d20
 > git.exe rev-parse --resolve-git-dir D:\Nexturn\new_jenkins_home\workspace\Flask_Application_Devlopment\.git # timeout=10
Fetching changes from the remote Git repository
 > git.exe config remote.origin.url https://github.com/Rishabh28n/Flask_main_to_azure # timeout=10
Fetching upstream changes from https://github.com/Rishabh28n/Flask_main_to_azure
 > git.exe --version # timeout=10
 > git --version # 'git version 2.39.0.windows.2'
using GIT_ASKPASS to set credentials Github account
 > git.exe fetch --tags --force --progress -- https://github.com/Rishabh28n/Flask_main_to_azure +refs/heads/*:refs/remotes/origin/* #
timeout=10
 > git.exe rev-parse "refs/remotes/origin/main^{commit}" # timeout=10
Checking out Revision 10289bb4caa0e5720781b8ba7828e65aa1784ea1 (refs/remotes/origin/main)
 > git.exe config core.sparsecheckout # timeout=10
 > git.exe checkout -f 10289bb4caa0e5720781b8ba7828e65aa1784ea1 # timeout=10
Commit message: "Update app.py"
 > git.exe rev-list --no-walk 62e20ad7432e8740e52ec4fd6871726531ed130b # timeout=10
[Flask_Application_Devlopment] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins18123881837479925658.bat
```

← → C ⊙ 127.0.0.1:8080/job/Flask_Application_Devlopment/8/console ☆ ⊡ | ● R ⋮

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Dashboard > Flask_Application_Devlopment > #8 > Console Output

```
"Setting up Python virtual environment..."
"Removing existing virtual environment..."
"Python version:"
Python 3.11.4
"Pip version:"
pip 23.1.2 from D:\Nexturn\new_jenkins_home\workspace\Flask_Application_Devlopment\venv\Lib\site-packages\pip (python 3.11)

"Installing requirements from requirements.txt..."
Collecting flask (from -r requirements.txt (line 1))
  Using cached flask-3.1.0-py3-none-any.whl (102 kB)
Collecting Werkzeug>=3.1 (from flask->-r requirements.txt (line 1))
  Using cached werkzeug-3.1.3-py3-none-any.whl (224 kB)
Collecting Jinja2>=3.1.2 (from flask->-r requirements.txt (line 1))
  Using cached jinja2-3.1.5-py3-none-any.whl (134 kB)
Collecting itsdangerous>=2.2 (from flask->-r requirements.txt (line 1))
  Using cached itsdangerous-2.2.0-py3-none-any.whl (16 kB)
Collecting click>=8.1.3 (from flask->-r requirements.txt (line 1))
  Using cached click-8.1.8-py3-none-any.whl (98 kB)
Collecting blinker>=1.9 (from flask->-r requirements.txt (line 1))
  Using cached blinker-1.9.0-py3-none-any.whl (8.5 kB)
Collecting colorama (from click>=8.1.3->flask->-r requirements.txt (line 1))
  Using cached colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Collecting MarkupSafe>=2.0 (from Jinja2>=3.1.2->flask->-r requirements.txt (line 1))
  Using cached MarkupSafe-3.0.2-cp311-cp311-win_amd64.whl (15 kB)
Installing collected packages: MarkupSafe, itsdangerous, colorama, blinker, Werkzeug, Jinja2, click, flask
Successfully installed Jinja2-3.1.5 MarkupSafe-3.0.2 Werkzeug-3.1.3 blinker-1.9.0 click-8.1.8 colorama-0.4.6 flask-3.1.0 itsdangerous-2.2.0

[notice] A new release of pip is available: 23.1.2 -> 24.3.1
```

Dashboard > Flask_Application_Devlopment > #8 > Console Output

```
"Virtual environment setup complete."
[Flask_Application_Devlopment] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins7663725102234625711.bat
"Starting Flask application deployment..."
ERROR: Input redirection is not supported, exiting the process immediately.
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
    0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0 * Serving Flask app 'app.py'
 * Debug mode: off
    0     0    0     0    0     0      0      0 --:--:-- 0:00:01 --:--:--     0WARNING: This is a development server. Do not use it in a
production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5001
 * Running on http://192.168.153.7:5001
Press CTRL+C to quit

    0     0    0     0    0     0      0      0 --:--:-- 0:00:01 --:--:--     0127.0.0.1 - - [24/Jan/2025 18:30:09] "GET /health HTTP/1.1" 200
-

  100    21  100    21    0     0     12      0  0:00:01  0:00:01 --:--:--    12
{"status":"healthy"}
"Flask application deployed and verified successfully."
Process leaked file descriptors. See https://www.jenkins.io/redirect/troubleshooting/process-leaked-file-descriptors for more information
[Flask_Application_Devlopment] $ cmd /c call C:\Users\RISHAB~1\AppData\Local\Temp\jenkins2824212379143106696.bat
"Performing health checks..."
"Health check attempt 1..."
127.0.0.1 - - [24/Jan/2025 18:30:19] "GET /health HTTP/1.1" 200 -
"Health check passed on attempt 1"
Finished: SUCCESS
```

Exercise 4: Pipeline Job - End-to-End CI/CD for a React Application

1. **Objective:** Implement a CI/CD pipeline for a React web application.

2. **Steps:**

   - Create a Pipeline Job.

   - **Write a Jenkinsfile to:**

     - Clone the React project from GitHub.

     - Install dependencies (npm install).

     - Run tests (npm test).

     - Build the project (npm run build).

     - Deploy the application by copying the build folder to a deployment directory.

   - **Add stages for:**

     - Linting using ESLint.

     - Post-deployment testing using curl to verify the app is running.

3. **Task:** Run the pipeline and validate each stage's output.

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Dashboard > End_to_end_React_Application > #2

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```
Started by user Rishabh Chouhan
Obtained Jenkinsfile from git https://github.com/Rishabh28n/Basic_react
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in D:\Nexturn\new_jenkins_home\workspace\End_to_end_React_Application@2
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential 657c2f3d-d360-4984-ba4d-f79800c43d20
Cloning the remote Git repository
Cloning repository https://github.com/Rishabh28n/Basic_react
 > git.exe init D:\Nexturn\new_jenkins_home\workspace\End_to_end_React_Application@2 # timeout=10
Fetching upstream changes from https://github.com/Rishabh28n/Basic_react
 > git.exe --version # timeout=10
 > git --version # 'git version 2.39.0.windows.2'
using GIT_ASKPASS to set credentials Github account
 > git.exe fetch --tags --force --progress -- https://github.com/Rishabh28n/Basic_react +refs/heads/*:refs/remotes/origin/* # timeout=10
 > git.exe config remote.origin.url https://github.com/Rishabh28n/Basic_react # timeout=10
 > git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > git.exe rev-parse "refs/remotes/origin/main^{commit}" # timeout=10
```

← → C ⓘ 127.0.0.1:8080/job/End_to_end_React_Application/2/console   ☆ ⊡ ⬇ Ⓡ ⋮

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Dashboard > End_to_end_React_Application > #2

```
 > git.exe checkout -f a89abb1c52ffbf9247dddfdd7ee6b132dc42f89e # timeout=10
Commit message: "React Basic files"
First time build. Skipping changelog.
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
 > git.exe rev-parse --resolve-git-dir D:\Nexturn\new_jenkins_home\workspace\End_to_end_React_Application@2\.git # timeout=10
Fetching changes from the remote Git repository
 > git.exe config remote.origin.url https://github.com/NikhilCyberk/basic-react-app.git # timeout=10
Fetching upstream changes from https://github.com/NikhilCyberk/basic-react-app.git
 > git.exe --version # timeout=10
 > git --version # 'git version 2.39.0.windows.2'
 > git.exe fetch --tags --force --progress -- https://github.com/NikhilCyberk/basic-react-app.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
 > git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision ae8ef0d1bcde0c8013b8123d7d9dc0492742876d (refs/remotes/origin/master)
 > git.exe config core.sparsecheckout # timeout=10
 > git.exe checkout -f ae8ef0d1bcde0c8013b8123d7d9dc0492742876d # timeout=10
 > git.exe branch -a -v --no-abbrev # timeout=10
 > git.exe checkout -b master ae8ef0d1bcde0c8013b8123d7d9dc0492742876d # timeout=10
Commit message: "Update Jenkinsfile"
First time build. Skipping changelog.
```

← → C ⓘ 127.0.0.1:8080/job/End_to_end_React_Application/2/console

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Dashboard > End_to_end_React_Application > #2

```
Commit message: "Update Jenkinsfile"
First time build. Skipping changelog.
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Install)
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\End_to_end_React_Application@2>npm install

added 269 packages, and audited 270 packages in 9s

97 packages are looking for funding
  run `npm fund` for details

4 vulnerabilities (1 moderate, 3 high)

To address all issues, run:
  npm audit fix

Run `npm audit` for details.
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Lint)
[Pipeline] script
[Pipeline] {
[Pipeline] bat
```

← → C ⓘ 127.0.0.1:8080/job/End_to_end_React_Application/2/console

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Dashboard > End_to_end_React_Application > #2

```
[ 32m[ 39m 34 modules transformed.
rendering chunks...
computing gzip size...
dist/index.html                     0.47 kB │ gzip:  0.30 kB
dist/assets/react-h3aPdYU7.svg      4.13 kB │ gzip:  2.14 kB
dist/assets/index-4sK4E3Wk.css      1.39 kB │ gzip:  0.72 kB
dist/assets/index-apIUfoim.js     143.43 kB │ gzip: 46.11 kB
 built in 1.49s
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy)
[Pipeline] echo
deploy success
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Build and deployment successful!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Exercise 5: Pipeline Job - Deploy a Flask Application with Gunicorn

1. **Objective:** Automate the deployment of a Flask application with Gunicorn on Windows.

2. **Steps:**

   - Create a Pipeline Job.

   - **Write a Jenkinsfile to:**

     - Clone a Flask application from GitHub.

     - Set up a Python virtual environment.

     - Install required packages using pip install -r requirements.txt.

     - Configure and start the Gunicorn server:

       ```
       gunicorn -b 127.0.0.1:8000 app:app
       ```

     - Verify the deployment using a curl command in the pipeline.

   - **Add stages for:**

     - Unit tests using pytest.

     - Post-deployment endpoint checks.

3. **Task:** Trigger the pipeline and ensure the Flask app is accessible on localhost.

← → C ⓘ 127.0.0.1:8080/job/Fask_Application_Gunicorn/3/console

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Dashboard > Fask_Application_Gunicorn > #3

```
Checking out Revision 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 (refs/remotes/origin/main)
 > git.exe config core.sparsecheckout # timeout=10
 > git.exe checkout -f 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 # timeout=10
Commit message: "Update Jenkins"
 > git.exe rev-list --no-walk 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Clone Repository)
[Pipeline] cleanWs
[WS-CLEANUP] Deleting project workspace...
[WS-CLEANUP] Deferred wipeout is used...
[WS-CLEANUP] done
[Pipeline] git
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/Rishabh28n/Simple_Flask
 > git.exe init D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn # timeout=10
Fetching upstream changes from https://github.com/Rishabh28n/Simple_Flask
 > git.exe --version # timeout=10
 > git --version # 'git version 2.39.0.windows.2'
 > git.exe fetch --tags --force --progress -- https://github.com/Rishabh28n/Simple_Flask +refs/heads/*:refs/remotes/origin/* # timeout=10
```

← → C ⓘ 127.0.0.1:8080/job/Fask_Application_Gunicorn/3/console

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Dashboard > Fask_Application_Gunicorn > #3

```
 > git.exe config remote.origin.url https://github.com/Rishabh28n/Simple_Flask # timeout=10
 > git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > git.exe rev-parse "refs/remotes/origin/main^{commit}" # timeout=10
Checking out Revision 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 (refs/remotes/origin/main)
 > git.exe config core.sparsecheckout # timeout=10
 > git.exe checkout -f 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 # timeout=10
 > git.exe branch -a -v --no-abbrev # timeout=10
 > git.exe checkout -b main 91bc18ef2c3b74ed30d82af64a08fb3c7e04c4f3 # timeout=10
Commit message: "Update Jenkins"
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Set Up Python Environment)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>python -m venv venv
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>venv\Scripts\activate.bat   && python -m pip install --upgrade pip
Requirement already satisfied: pip in d:\nexturn\new_jenkins_home\workspace\fask_application_gunicorn\venv\lib\site-packages (23.1.2)
Collecting pip
  Using cached pip-24.3.1-py3-none-any.whl (1.8 MB)
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 23.1.2
```

```
                    Successfully uninstalled pip-23.1.2
Successfully installed pip-24.3.1
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>venv\Scripts\activate.bat   && (pip install -r requirements.txt --verbose )
Using pip 24.3.1 from D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn\venv\Lib\site-packages\pip (python 3.11)
Collecting Flask==3.0.0 (from -r requirements.txt (line 6))
  Obtaining dependency information for Flask==3.0.0 from
https://files.pythonhosted.org/packages/36/42/015c23096649b908c809c69388a805a571a3bea44362fe87e33fc3afa01f/flask-3.0.0-py3-none-
any.whl.metadata
  Using cached flask-3.0.0-py3-none-any.whl.metadata (3.6 kB)
Collecting pytest==7.4.3 (from -r requirements.txt (line 7))
  Obtaining dependency information for pytest==7.4.3 from
https://files.pythonhosted.org/packages/f3/8c/f16efd81ca8e293b2cc78f111190a79ee539d0d5d36ccd49975cb3beac60/pytest-7.4.3-py3-none-
any.whl.metadata
  Using cached pytest-7.4.3-py3-none-any.whl.metadata (7.9 kB)
Collecting gunicorn==21.2.0 (from -r requirements.txt (line 8))
  Obtaining dependency information for gunicorn==21.2.0 from
https://files.pythonhosted.org/packages/0e/2a/c3a878eccb100ccddf45c50b6b8db8cf3301a6adede6e31d48e8531cab13/gunicorn-21.2.0-py3-none-
any.whl.metadata
  Using cached gunicorn-21.2.0-py3-none-any.whl.metadata (4.1 kB)
Collecting eventlet==0.33.3 (from -r requirements.txt (line 9))
  Obtaining dependency information for eventlet==0.33.3 from
https://files.pythonhosted.org/packages/90/97/928b89de2e23cc67136eccccf1c122adf74ffdb65bbf7d2964b937cedd4f/eventlet-0.33.3-py2.py3-none-
any.whl.metadata
  Using cached eventlet-0.33.3-py2.py3-none-any.whl.metadata (4.3 kB)
Collecting Werkzeug==3.0.1 (from -r requirements.txt (line 10))
  Obtaining dependency information for Werkzeug==3.0.1 from
```

```
https://files.pythonhosted.org/packages/c3/fc/254c3e9b5feb89ff5b9076a23218dafbc99c96ac5941e900b71206e6313b/werkzeug-3.0.1-py3-none-
any.whl.metadata
  Using cached werkzeug-3.0.1-py3-none-any.whl.metadata (4.1 kB)
Collecting Jinja2>=3.1.2 (from Flask==3.0.0->-r requirements.txt (line 6))
  Obtaining dependency information for Jinja2>=3.1.2 from
https://files.pythonhosted.org/packages/bd/0f/2ba5fbcd631e3e88689309dbe978c5769e883e4b84ebfe7da30b43275c5a/jinja2-3.1.5-py3-none-
any.whl.metadata
  Using cached jinja2-3.1.5-py3-none-any.whl.metadata (2.6 kB)
Collecting itsdangerous>=2.1.2 (from Flask==3.0.0->-r requirements.txt (line 6))
  Obtaining dependency information for itsdangerous>=2.1.2 from
https://files.pythonhosted.org/packages/04/96/92447566d16df59b2a776c0fb82dbc4d9e07cd95062562af01e408583fc4/itsdangerous-2.2.0-py3-none-
any.whl.metadata
  Using cached itsdangerous-2.2.0-py3-none-any.whl.metadata (1.9 kB)
Collecting click>=8.1.3 (from Flask==3.0.0->-r requirements.txt (line 6))
  Obtaining dependency information for click>=8.1.3 from
https://files.pythonhosted.org/packages/7e/d4/7ebdbd03970677812aac39c869717059dbb71a4cfc033ca6e5221787892c/click-8.1.8-py3-none-
any.whl.metadata
  Using cached click-8.1.8-py3-none-any.whl.metadata (2.3 kB)
Collecting blinker>=1.6.2 (from Flask==3.0.0->-r requirements.txt (line 6))
  Obtaining dependency information for blinker>=1.6.2 from
https://files.pythonhosted.org/packages/10/cb/f2ad4230dc2eb1a74edf38f1a38b9b52277f75bef262d8908e60d957e13c/blinker-1.9.0-py3-none-
any.whl.metadata
  Using cached blinker-1.9.0-py3-none-any.whl.metadata (1.6 kB)
Collecting iniconfig (from pytest==7.4.3->-r requirements.txt (line 7))
  Obtaining dependency information for iniconfig from
https://files.pythonhosted.org/packages/ef/a6/62565a6e1cf69e10f5727360368e451d4b7f58beeac6173dc9db836a5b46/iniconfig-2.0.0-py3-none-
any.whl.metadata
  Using cached iniconfig-2.0.0-py3-none-any.whl.metadata (2.6 kB)
```

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```
https://files.pythonhosted.org/packages/68/1b/e0a87d256e40e8c888847551b20a017a6b98139178505dc7ffb96f04e954/dnspython-2.7.0-py3-none-
any.whl.metadata
  Using cached dnspython-2.7.0-py3-none-any.whl.metadata (5.8 kB)
Collecting greenlet>=0.3 (from eventlet==0.33.3->-r requirements.txt (line 9))
  Obtaining dependency information for greenlet>=0.3 from
https://files.pythonhosted.org/packages/12/da/b9ed5e310bb8b89661b80cbcd4db5a067903bbcd7fc854923f5ebb4144f0/greenlet-3.1.1-cp311-cp311-
win_amd64.whl.metadata
  Using cached greenlet-3.1.1-cp311-cp311-win_amd64.whl.metadata (3.9 kB)
Collecting six>=1.10.0 (from eventlet==0.33.3->-r requirements.txt (line 9))
  Obtaining dependency information for six>=1.10.0 from
https://files.pythonhosted.org/packages/b7/ce/149a00dd41f10bc29e5921b496af8b574d8413afcd5e30dfa0ed46c2cc5e/six-1.17.0-py2.py3-none-
any.whl.metadata
  Using cached six-1.17.0-py2.py3-none-any.whl.metadata (1.7 kB)
Collecting MarkupSafe>=2.1.1 (from Werkzeug==3.0.1->-r requirements.txt (line 10))
  Obtaining dependency information for MarkupSafe>=2.1.1 from
https://files.pythonhosted.org/packages/da/b8/3a3bd761922d416f3dc5d00bfbed11f66b1ab89a0c2b6e887240a30b0f6b/MarkupSafe-3.0.2-cp311-cp311-
win_amd64.whl.metadata
  Using cached MarkupSafe-3.0.2-cp311-cp311-win_amd64.whl.metadata (4.1 kB)
Using cached flask-3.0.0-py3-none-any.whl (99 kB)
Using cached pytest-7.4.3-py3-none-any.whl (325 kB)
Using cached gunicorn-21.2.0-py3-none-any.whl (80 kB)
Using cached eventlet-0.33.3-py2.py3-none-any.whl (226 kB)
Using cached werkzeug-3.0.1-py3-none-any.whl (226 kB)
Using cached blinker-1.9.0-py3-none-any.whl (8.5 kB)
Using cached click-8.1.8-py3-none-any.whl (98 kB)
Using cached dnspython-2.7.0-py3-none-any.whl (313 kB)
Using cached greenlet-3.1.1-cp311-cp311-win_amd64.whl (298 kB)
Using cached itsdangerous-2.2.0-py3-none-any.whl (16 kB)
```

24°C   ENG   19:51

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Dashboard > Fask_Application_Gunicorn > #3

```
Using cached MarkupSafe-3.0.2-cp311-cp311-win_amd64.whl (15 kB)
Using cached pluggy-1.5.0-py3-none-any.whl (20 kB)
Using cached six-1.17.0-py2.py3-none-any.whl (11 kB)
Using cached colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Using cached iniconfig-2.0.0-py3-none-any.whl (5.9 kB)
Using cached packaging-24.2-py3-none-any.whl (65 kB)
Installing collected packages: six, pluggy, packaging, MarkupSafe, itsdangerous, iniconfig, greenlet, dnspython, colorama, blinker, Werkzeug,
pytest, Jinja2, gunicorn, eventlet, click, Flask
Successfully installed Flask-3.0.0 Jinja2-3.1.5 MarkupSafe-3.0.2 Werkzeug-3.0.1 blinker-1.9.0 click-8.1.8 colorama-0.4.6 dnspython-2.7.0
eventlet-0.33.3 greenlet-3.1.1 gunicorn-21.2.0 iniconfig-2.0.0 itsdangerous-2.2.0 packaging-24.2 pluggy-1.5.0 pytest-7.4.3 six-1.17.0
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Run Tests)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>venv\Scripts\activate.bat   && python -m pytest
============================= test session starts =============================
platform win32 -- Python 3.11.4, pytest-7.4.3, pluggy-1.5.0
rootdir: D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn
collected 2 items

tests\test_app.py ..                                              [100%]
```

127.0.0.1:8080/job/Fask_Application_Gunicorn/3/console

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Dashboard > Fask_Application_Gunicorn > #3

```
tests\test_app.py ..                                              [100%]

=============================== 2 passed in 0.24s ================================
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy Application)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>echo @echo off  1>start_server.bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>echo set FLASK_APP=app.py  1>>start_server.bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>echo set FLASK_ENV=production  1>>start_server.bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>echo call venv\Scripts\activate.bat  1>>start_server.bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>echo python -m flask run --host=127.0.0.1 --port=8000  1>>start_server.bat
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>start /B start_server.bat
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "Start-Sleep -Seconds 15"
```

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Dashboard > Fask_Application_Gunicorn > #3

```
D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "Start-Sleep -Seconds 15"
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Verify Deployment)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "try {                    $response = Invoke-
WebRequest -Uri http://127.0.0.1:8000 -UseBasicParsing;                    if ($response.StatusCode -eq 200) {
Write-Host 'Application is running successfully!';                    exit 0;                    } else {
Write-Host 'Application returned status code: ' $response.StatusCode;                    exit 1;                    }
} catch {                    Write-Host 'Failed to connect to application: ' $_.Exception.Message;                    exit
1;                    }"
Application is running successfully!
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Health Check)
[Pipeline] script
[Pipeline] {
[Pipeline] bat
```

```
D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "try {                    $response = Invoke-
WebRequest -Uri http://127.0.0.1:8000/health -UseBasicParsing;                    $content = $response.Content | ConvertFrom-Json;
if ($content.status -eq 'healthy') {                    Write-Host 'Health check passed!';                    exit
0;                    } else {                    Write-Host 'Health check failed: ' $content.status;
exit 1;                    }                    } catch {                    Write-Host 'Health check failed: '
$_.Exception.Message;                    exit 1;                    }"
Health check passed!
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "try {                    Get-Process -Name python -
ErrorAction SilentlyContinue | Stop-Process -Force -ErrorAction SilentlyContinue;                    Get-Process -Name flask -ErrorAction
SilentlyContinue | Stop-Process -Force -ErrorAction SilentlyContinue;                    exit 0;                    } catch {
exit 0;                    }"
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
```

```
Health check passed!
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] script
[Pipeline] {
[Pipeline] bat

D:\Nexturn\new_jenkins_home\workspace\Fask_Application_Gunicorn>powershell -Command "try {                    Get-Process -Name python -
ErrorAction SilentlyContinue | Stop-Process -Force -ErrorAction SilentlyContinue;                    Get-Process -Name flask -ErrorAction
SilentlyContinue | Stop-Process -Force -ErrorAction SilentlyContinue;                    exit 0;                    } catch {
exit 0;                    }"
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```