

Week 5 - Capstone: Azure DevOps Pipeline for Supply Chain Script

Objective

Create a simple Azure DevOps pipeline that:

- Installs dependencies
- Executes a Python script
- Logs results and marks completion

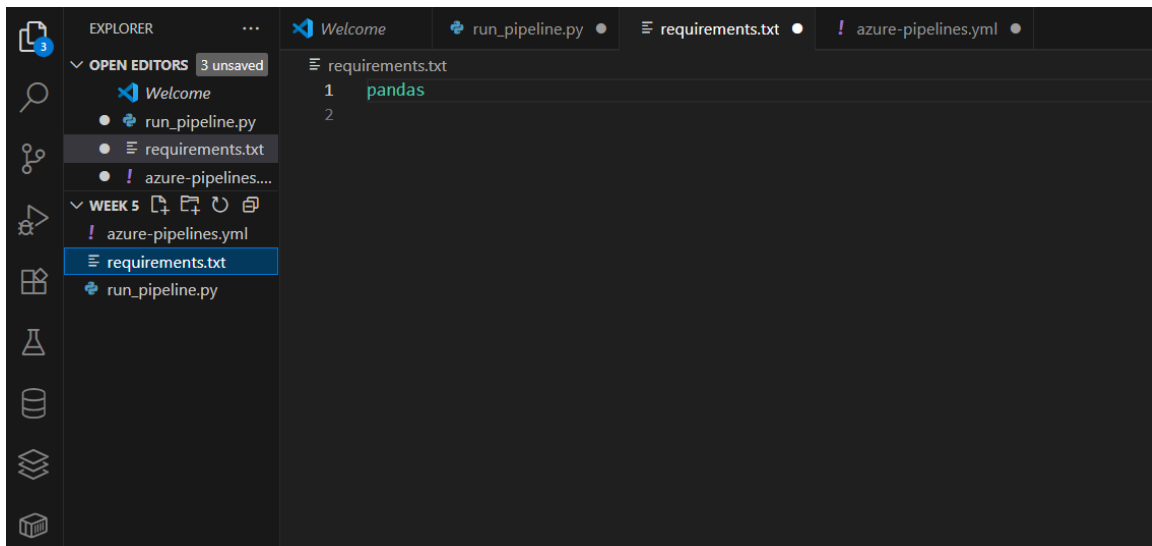
Tools

- Azure DevOps
- Git
- Python

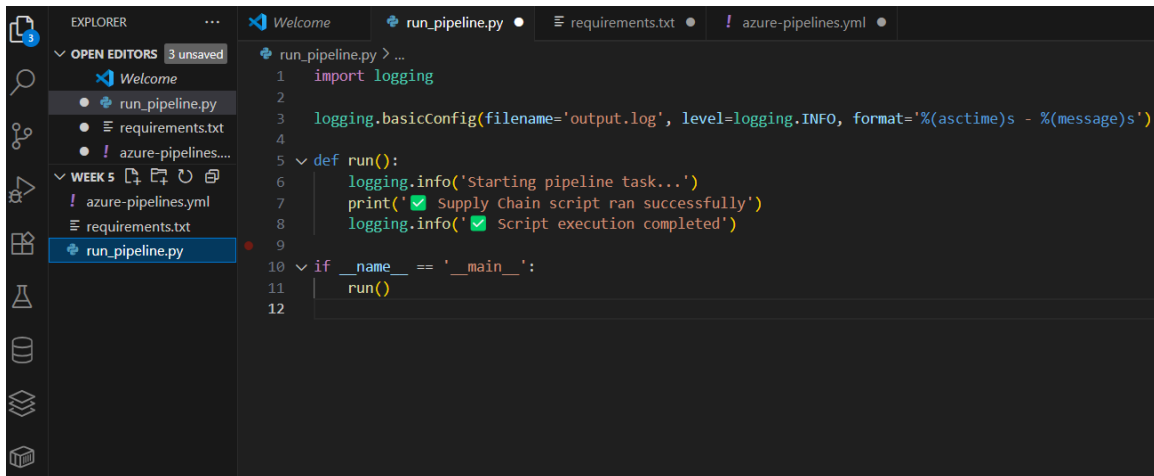
1. Project Setup

Ensure your local folder contains the following:

- requirements.txt

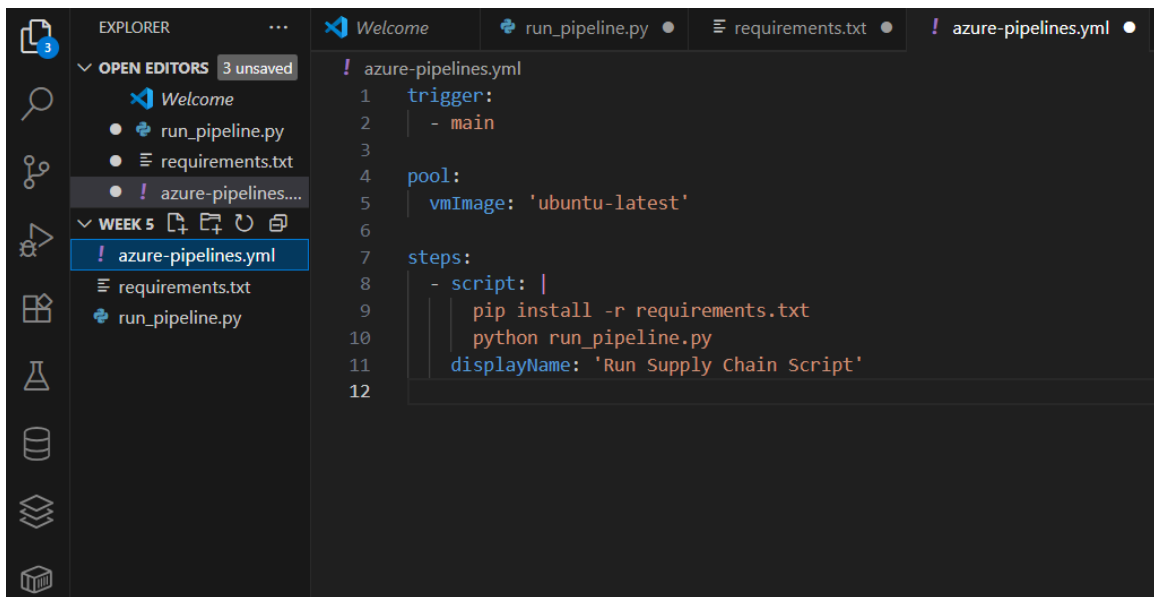


- run_pipeline.py

A screenshot of the Visual Studio Code editor. The Explorer sidebar on the left shows a project structure with files: run_pipeline.py, requirements.txt, and azure-pipelines.yml. The main editor window displays the run_pipeline.py file with the following Python code:

```
1 import logging
2
3 logging.basicConfig(filename='output.log', level=logging.INFO, format='%(asctime)s - %(message)s')
4
5 def run():
6     logging.info('Starting pipeline task...')
7     print('✅ Supply Chain script ran successfully')
8     logging.info('✅ Script execution completed')
9
10 if __name__ == '__main__':
11     run()
12
```

- YAML Pipeline File (azure-pipelines.yml)

A screenshot of the Visual Studio Code editor. The Explorer sidebar on the left shows the project structure with files: run_pipeline.py, requirements.txt, and azure-pipelines.yml. The main editor window displays the azure-pipelines.yml file with the following YAML code:

```
1 trigger:
2   - main
3
4 pool:
5   vmImage: 'ubuntu-latest'
6
7 steps:
8   - script: |
9       pip install -r requirements.txt
10      python run_pipeline.py
11      displayName: 'Run Supply Chain Script'
12
```

5. Git Push Instructions

cd to your project folder

Initialize and push:

git init

git remote add origin <git@ssh.dev.azure.com:v3/lavanyajeyaram06/Week%205-%20Supply%20chain/Week%205-%20Supply%20chain>

git add .

git commit -m "Add pipeline and script"

git push -u origin main

```
C:\Users\Lavi>cd C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git init
Initialized empty Git repository in C:/Users/Lavi/Desktop/Capstone_projects/Supply_Chain/Week 5/.git/

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git remote add origin git@ssh.dev.azure.com:v3/lavanyajeyaram06/Week%205-%20Supply%20chain/Week%205-%20Supply%20chain

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git add .

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git commit -m "🔥 Added pipeline and script for supply chain"
[master (root-commit) 132d11e] 🔥 Added pipeline and script for supply chain
 3 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 azure-pipelines.yml
 create mode 100644 requirements.txt
 create mode 100644 run_pipeline.py

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git branch -m master main

C:\Users\Lavi\Desktop\Capstone_projects\Supply_Chain\Week 5>git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 291 bytes | 97.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Validating commits... (1/1) done (0 ms)
```

6. Run the Pipeline

1. Go to Azure DevOps > Pipelines > New Pipeline
2. Choose Azure Repos Git
3. Select your repo
4. Use existing azure-pipelines.yml
5. Click Run

Deliverables

The screenshot shows the Azure DevOps web interface. On the left is a sidebar with navigation options: Overview, Boards, Repos, Pipelines (selected), Environments, Library, Test Plans, and Artifacts. The main area displays the details of a pipeline run. At the top, it says 'This run will be cleaned up after 1 month based on your project settings.' Below that, the 'Summary' tab is active, showing 'Individual CI by Lavanya jeyaram' for the 'Week 5- Supply chain' repository. It indicates the run started 'Just now' and took '<1s'. There are '0 work items' and '0 artifacts' related. A 'View 2 changes' button is present. Under the 'Errors' section, a message states: 'No hosted parallelism has been purchased or granted. To request a free parallelism grant, please fill out the following form https://aka.ms/azpipelines-parallelism-request'. At the bottom, the 'Jobs' section shows a single job named 'Job' with a status of 'Failed'.

- Azure DevOps YAML pipeline file
- Execution log or console output