

## Week 5 - CI/CD Pipeline - Supply Chain

### Objective:

1. To automate the end-to-end supply chain data processing workflow using Azure DevOps pipelines, which:
2. Installs necessary Python dependencies.
3. Executes the core processing script (run\_pipeline.py) that analyzes order and inventory data.
4. Logs processed output and statistical summaries to files for further reporting.
5. Publishes the results as build artifacts and ensures consistent, repeatable execution through CI/CD automation.

### Pre-requisites:

Before you begin, make sure you have:

- Authentication: SSH Key or Personal Access Token (PAT) configured.
- Tools Installed:
  1. Git
  2. Python 3.x
  3. VS Code or any preferred IDE
- Local Project Folder contains:
  - Python script: alert\_threshold.py
  - Azure DevOps pipeline config file: azure-pipelines.yml

### Step-by-Step Execution

**Step 1:** Create Python Script & YAML in Local Folder

**Step 2:** Create Azure DevOps Project

1. Go to Azure DevOps Portal.
2. Click "New Project".
3. Enter project name and visibility.
4. Click "Create".

**Step 3:** : Push Local Code to Azure Repo via SSH

```
>> cd C:\Users\meena\OneDrive\Documents\Hexaware-projects\Project-DE\Supply-Chain
```

```
>> git init
```

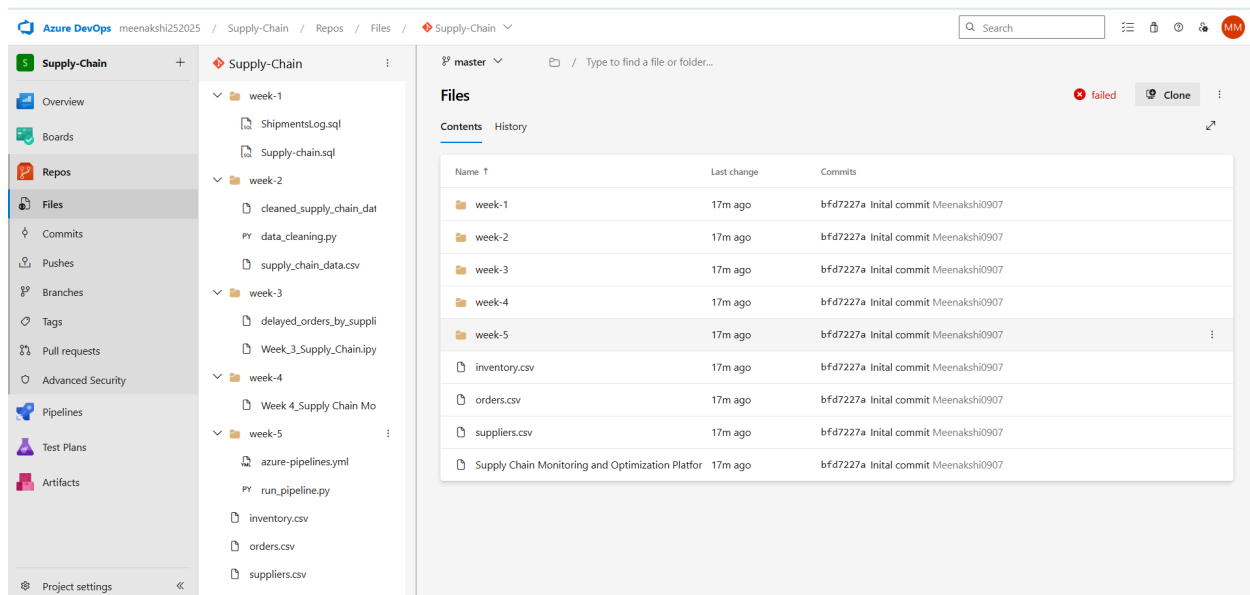
```
>> git add .
```

```
>> git commit -m "Initial commit"
```

```
>> git remote add origin
```

```
"git@ssh.dev.azure.com:v3/meenakshi252025/Supply-Chain/Supply-Chain"
```

```
>> git push -u origin master
```



#### Step 4: Configure and Run Azure Pipeline

1. In Azure DevOps, go to Pipelines → Create Pipeline.
2. Select:
  - Code source: Azure Repos Git
  - Your repository
  - Choose: "Existing Azure Pipelines YAML file"
3. Specify:
  - Branch: main
  - YAML Path: /Week 5/azure-pipelines.yml
4. Click Continue → Run.

Azure DevOps meenakshi252025 / Supply-Chain / Pipelines / Supply-Chain / 20250705.1

Supply-Chain +

Overview  
Boards  
Repos  
Pipelines  
Pipelines  
Environments  
Library  
Test Plans  
Artifacts

Project settings <<

#20250705.1 • Initial commit  
Supply-Chain

Rerun failed jobs Run new

This run will be cleaned up after 1 month based on your project settings.

Summary Code Coverage

Manually run by Meenakshi M

Repository and version  
Supply-Chain  
master bfd7227a

Time started and elapsed  
Today at 12:10 PM  
<1s

Related  
0 work items  
0 artifacts

Tests and coverage  
Get started

View change

Errors 1

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>

20250705.1

[View documentation for troubleshooting failed runs](#)

Jobs

Name	Status	Duration
Job	Failed	

## Final Output:

- Output file: output/processed\_orders.csv
- Included delay analysis for each order
- The complete ETL flow was run in an automated, repeatable manner
- Execution logs and artifacts are stored under the Azure DevOps pipeline run history