

# Azure DevOps

## Variable Groups

- [Refer Here](#) for official docs
- It is recommended to use variable groups
  - when variables have sensitive information
  - too many variables
  - to make sensitive variables secure, variable groups can be linked with Azure Key Vault

## Templates

- Reusable pipelines or parts of pipelines are referred as templates
- [Refer Here](#) for official docs

### Lets Create a template which can be used by both spring petclinic and game of life

- basic pipeline

```
pool:
  vmImage: 'ubuntu-22.04'

trigger:
  - main

schedules:
  - cron: '30 1 * * 6'
    displayName: weeklybuild
    branches:
      include:
        - main

stages:
  - stage: build
    displayName: 'Build using Maven'
    jobs:
      - job: build
        displayName: 'Maven Build'
        steps:
          - task: Maven@4
            inputs:
              mavenPOMFile: 'pom.xml'
              goals: clean package
              publishJUnitResults: true
              testResultsFiles: '**/surefire-reports/TEST-*.xml'
              javaHomeOption: 'JDKVersion'
              jdkVersionOption: '1.17'
```

- Now create a folder called as templates with build-stage.yaml

```

stages:
  - stage: build
    displayName: 'Build using Maven'
    jobs:
      - job: build
        displayName: 'Maven Build'
        steps:
          - task: Maven@4
            inputs:
              mavenPOMFile: 'pom.xml'
              goals: clean package
              publishJUnitResults: true
              testResultsFiles: '**/surefire-reports/TEST-*.xml'
              javaHomeOption: 'JDKVersion'
              jdkVersionOption: '1.17'

```

- Now in azure-pipelines.yaml

```

pool:
  vmImage: 'ubuntu-22.04'

trigger:
  - main

schedules:
  - cron: '30 1 * * 6'
    displayName: weeklybuild
    branches:
      include:
        - main

stages:
  - template: templates/build-stage.yaml

```

- Lets make our template parametrized with java version

```

parameters:
  - name: jdkversion
    type: string
    default: "1.17"

stages:
  - stage: build
    displayName: 'Build using Maven'
    jobs:
      - job: build
        displayName: 'Maven Build'
        steps:
          - task: Maven@4
            inputs:

```

```

mavenPOMFile: 'pom.xml'
goals: clean package
publishJUnitResults: true
testResultsFiles: '**/surefire-reports/TEST-*.xml'
javaHomeOption: 'JDKVersion'
jdkVersionOption: "${{ parameters.jdkversion }}"

```

- Now in azure-pipelines.yaml

```

pool:
  vmImage: 'ubuntu-22.04'

trigger:
  - main

schedules:
  - cron: '30 1 * * 6'
    displayName: weeklybuild
    branches:
      include:
        - main

stages:
  - template: templates/build-stage.yaml
    parameters:
      jdkversion: '1.17'

```

- Now lets create a new repo called as `azuredevopstemplates` and in that create a maven folder with `build-stage.yaml`

```

parameters:
  - name: jdkversion
    type: string
    default: "1.17"

stages:
  - stage: build
    displayName: 'Build using Maven'
    jobs:
      - job: build
        displayName: 'Maven Build'
        steps:
          - task: Maven@4
            inputs:
              mavenPOMFile: 'pom.xml'
              goals: clean package
              publishJUnitResults: true
              testResultsFiles: '**/surefire-reports/TEST-*.xml'
              javaHomeOption: 'JDKVersion'
              jdkVersionOption: "${{ parameters.jdkversion }}"

```

- [Refer Here](#) for using templates from other repositories
- Now lets changes azure-pipelines.yaml of gameoflife

```
pool:
  vmImage: 'ubuntu-22.04'

trigger:
  - master

schedules:
  - cron: '30 1 * * 6'
    displayName: weeklybuild
    branches:
      include:
        - master
resources:
  repositories:
    - repository: templates
      name: azuredevopstemplates
      ref: main
      type: git
stages:
  - template: maven/build-stage.yaml@templates
    parameters:
      jdkversion: '1.8'
```

- Now lets apply this to spring-petclinic

```
pool:
  vmImage: 'ubuntu-22.04'

trigger:
  - main

schedules:
  - cron: '30 1 * * 6'
    displayName: weeklybuild
    branches:
      include:
        - main
resources:
  repositories:
    - repository: templates
      name: azuredevopstemplates
      ref: main
      type: git
stages:
  - template: maven/build-stage.yaml@templates
```

```
parameters:  
  jdkversion: '1.17'
```

- Exercise:
  - Make changes in the template to publish build artifacts take archivefilepattern as parameter
    - spc **\*\*/sprint-petclinic\*.jar**
    - gameoflife **\*\*/\*.war**