

## pipeline project resources

### 1- Jenkins file for the pipeline Docker image to ECR

- this script allows you to make a declarative pipeline.
- the pipeline in question will allow you to do the following steps:

**1- Checkout**

**2- Code Build**

**3- Test**

**4- Build image** : image build stage. here, ECR is used to build and generate a docker image

**5- Deploy** : send image to ECR



```

pipeline {
    agent any
    tools{
        maven 'M2_HOME'
    }
    environment {
        registry = '076892551558.dkr.ecr.us-east-1.amazonaws.com'
    }
    /devop_repository'
    registryCredential = 'jenkins-ecr'
    dockerimage = ''
    stages {
        stage('Checkout'){
            steps{
                git branch: 'main', url: 'https://github.com/Hermann90/helloworld_jan_22.git'
            }
        }
        stage('Code Build') {
            steps {
                sh 'mvn clean package'
            }
        }
        stage('Test') {
            steps {
                sh 'mvn test'
            }
        }
        stage('Build Image') {
            steps {
                script{
                    dockerImage = docker.build registry +
                    ":%BUILD_NUMBER"
                }
            }
        }
        stage('Deploy image') {
            steps{
                script{
                    docker.withRegistry("https://" + registry, "ecr:us-east-1:" + registryCredential) {
                        dockerImage.push()
                    }
                }
            }
        }
    }
}

```

## 2- description of the different parts of the Jenkinsfile

- you can see here a small description of our Jenkinsfile

The screenshot shows a Jenkinsfile in a code editor. The file is named 'helloworld\_jan\_22' and is located in the 'main' branch. The code is as follows:

```
1 pipeline {
2   agent any
3   tools{
4     maven 'M2_HOME'
5   }
6   environment {
7     registry = '076892551558.dkr.ecr.us-east-1.amazonaws.com/devop_repository'
8     registryCredential = 'jenkins-ecr'
9     dockerimage = ''
10  }
11  stages {
12    stage('Checkout'){
13      steps{
14        git branch: 'main', url: 'https://github.com/Hermann90/helloworld_jan_22.git'
15      }
16    }
17    stage('Code Build') {
18      steps {
19        sh 'mvn clean package'
20      }
21    }
22    stage('Test') {
23      steps {
24        sh 'mvn test'
25      }
26    }
27  }
28  stage('Build Image') {
29    steps {
30      script{
31        dockerImage = docker.build registry + ":$BUILD_NUMBER"
32      }
33    }
34  }
35  stage('Deploy image') {
36    steps{
37      script{
38        docker.withRegistry("https://" + registry, "ecr:us-east-1:" + registryCredential) {
39          dockerImage.push()
40        }
41      }
42    }
43  }
44 }
45 }
```

Annotations in the image:

- Tools declaration**: Two red boxes with arrows pointing to the `tools{}` block (lines 3-5) and the `environment {}` block (lines 6-10).
- image build stage. here, ECR is used to build and generate a docker image**: A red box with an arrow pointing to the `stage('Build Image')` block (lines 28-34).
- Send image to AWS ECR**: A red box with an arrow pointing to the `stage('Deploy image')` block (lines 35-42).

