Capstone Project Part-4 (AUTOMATE BUILD & DEPLOYMENT USING DOCKER + GITHUB ACTIONS)

===

STEP 1 — Create Dockerfile for Refunds API

===

In your project root, create a file named:

> **Dockerfile**

Paste this **working** configuration:

```
FROM eclipse-temurin:17-jre-jammy

ARG JAR_FILE=target/*.jar

COPY ${JAR_FILE} app.jar

EXPOSE 8080

ENTRYPOINT ["java", "-jar", "/app.jar"]
```

STEP 2 — Create Docker Hub Repository

===

1. Go to https://hub.docker.com

2. Login

3. Click **Create Repository**

4. Name it: **refunds-api**

5. Visibility: **Public**

Your Docker Hub repo URL will be:

docker.io/<your-username>/refunds-api

===

STEP 3 — Configure GitHub Secrets

===

Go to:

GitHub Repository → Settings → Secrets and Variables → Actions → New Repository Secret

Add these:

Secret Name	Value
DOCKERHUB_USERNAME	your Docker Hub username
DOCKERHUB_TOKEN	Docker Hub access token

===

STEP 9 — Create GitHub Actions Workflow

===

Create GitHub Actions:

.github/workflows/

Create file:

```
.github/workflows/docker-build-push.yml
```

```
docker-build-push.yml
```

Paste this **complete workflow**:

```yaml
name: Build and Push Docker Image

on:
 push:
  branches: [ "main" ]   # Runs when pushing to main branch yes

jobs:
 build-and-push:
  runs-on: ubuntu-latest

  steps:

   - name: Checkout repository
     uses: actions/checkout@v3

   - name: Set up JDK 17
     uses: actions/setup-java@v3
     with:
```

```
        distribution: 'temurin'
        java-version: '17'


    - name: Build with Maven
      run: mvn -B clean package


    - name: Log in to Docker Hub
      uses: docker/login-action@v3
      with:
        username: ${{ secrets.DOCKERHUB_USERNAME }}
        password: ${{ secrets.DOCKERHUB_TOKEN }}


    - name: Build Docker image
      run: docker build -t hkshitesh/demorefund .


    - name: Push Docker image
      run: docker push hkshitesh/demorefund
```

===

===

STEP 10 — Run the Final Image from Docker Hub

===

On ANY machine (local/VM/cloud):

```
docker pull <username>/refunds-api:latest
```

Run it:

```
docker run -p 8080:8080 <username>/refunds-api:latest
```

Test:

GET http://localhost:8080/refunds

Authorization: Bearer my-secret-token