To accomplish the task, follow the steps outlined below:

1. Clone the Repository: Clone the repository containing the 2-simpleapp folder onto your local machine.
2. Create Dockerfile: Within the 2-simpleapp folder, create a Dockerfile to containerize the application.

# Use a base image with Java installed  
FROM openjdk:8-jdk-alpine

# Set the working directory in the container  
WORKDIR /app  
  
# Copy the application jar file into the container at /app  
COPY Main.java /app  
  
# Compile the Java file  
RUN javac Main.java  
  
# Specify the command to run your application  
CMD ["java", "Main"]

1. Local Testing: Build the Docker image locally and test the Dockerized application to ensure it functions correctly within the container.
2. Set Up Docker Registry: Choose a Docker registry service like Docker Hub. Create an account there and create a repository to store your Docker images.
3. GitHub Actions Automation: Set up GitHub Actions to automate the build and push processes.

Secrets: Set up Docker Hub credentials as secrets in your GitHub repository settings. Go to Settings -> Secrets -> New repository secret. Add DOCKER\_USERNAME and DOCKER\_PASSWORD.