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Algorithm- Setting Up Jenkins Pipeline to Deploy Docker Swarm

1. Start of the Jenkins Pipeline.
2. Set up the Jenkins agent to run on any available node.
3. Define the tools used in the pipeline:
   - Install and configure Maven with the label "M3."
   - install and configure Java 1 with the label "java1."
4. Define the stages in the pipeline:

   - Checkout from GitHub:

   - Use the "git" command to clone the "awtraining1/sl" repository from the "main" branch.

   - Maven Build:

   - Navigate to the "PHASE5/my/spring-bootdemo" directory.
   - Execute the "mvn clean package" command to build the Spring Boot application.
   - The -Dmaven.test.skip=true flag skips running tests during the build.

   - Docker Image Creation:
   - Navigate to the "PHASE5/my/spring-bootdemo" directory.
   - Build the Docker image using the Dockerfile.
   - The Dockerfile uses an Alpine-based JDK 17 image, copies the packaged JAR file ("app.jar") into the image, and sets the entry point to run the JAR.

   - Push Docker Image:

   - Tag the Docker image with the name "my-morningspring-app" using docker tag.
   - Push the tagged Docker image to the Docker Hub repository "anithaneel/my-morning-spring-app" using docker push.

5. End of the Jenkins Pipeline.