SWE523 PROJECT STUDY 3 (2025)

Docker Compose

Due date: 21 Nov 2025, class time.

In this project you will publish your project on a cloud either AWS, Azure or Google. In this project you are supposed to the following steps:

- Create Dockerfile and docker-compose.yaml in your local computer along with your project. These will generate containerized app and organize the containers interactions.
- After completing coding and testing of your project, obtain a jar file and containerized application using your dockerfile.
- Push your dockerized app (docker image) to the DockerHub.
- Create an EC2 instance on the AWS with minimum settings and Linux OS.
- Install Docker tools on EC2.
- Copy the docker-compose.yaml file to the EC2 instance.
- Run docker-compose command with your “docker-compose.yaml” file.
- Observe that required images (app, redis and db) are pulled form the hub and the app starts up correctly.
- Install Nginx and configure it so the external port 80 will be forwarded to local 8080.
- Show that your application is accessible from remote browser, and everything works properly.

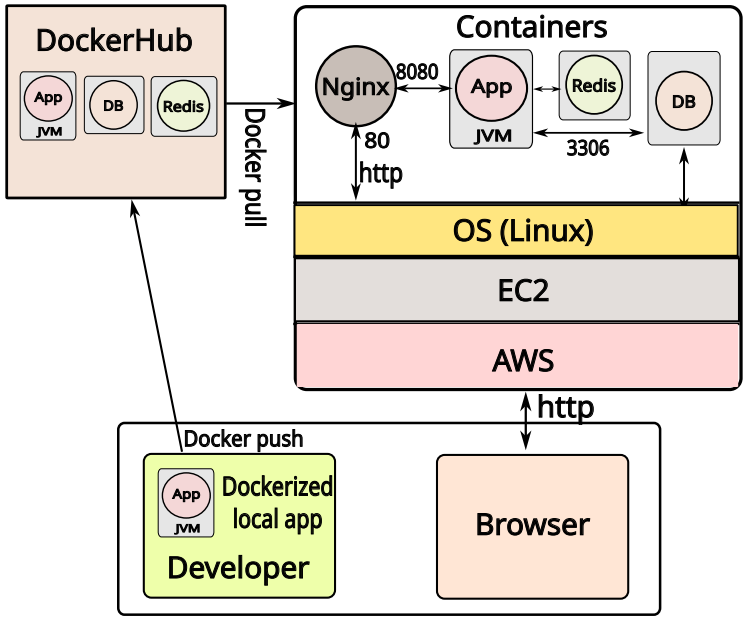

Figure 1. Project structure.

Grading:

No	Task	Grade
1	Project docker image is created locally.	20
2	Local image is pushed to the DockerHub.	10
3	Project and the other required images pulled from DockerHub to EC2.	20
4	Required software is installed and configured properly on the EC2.	20
5	Project is published correctly.	20
6	Everything works as described with no error, exceptions handled properly.	10

PS: Student must show up for presentation to collect points.