

# INSTALLATION GUIDE:

## GIT REPOSITORY

<https://gitlab.gbar.dtu.dk/s192675/02267-microservices>

## REQUIRED TOOLS FOR INSTALLATION

- Java 8 JDK (<https://adoptopenjdk.net/installation.html>):
  - o `wget -qO - https://adoptopenjdk.jfrog.io/adoptopenjdk/api/gpg/key/public | sudo apt-key add`
  - o `sudo add-apt-repository --yes https://adoptopenjdk.jfrog.io/adoptopenjdk/deb/`
  - o `apt-get install adoptopenjdk-8-hotspot`
- Maven
  - o Mac/Linux:
    - `sudo apt install maven`
    - If that does not work out of the box you have to update the contents of the apt repositories with “`sudo apt update`”
  - o Windows:
    - Maven can be installed here: <https://maven.apache.org/download.cgi>
- Docker
  - o On Linux:
    - 1. Update the repositories: `sudo apt update`
    - 2. Install docker: `sudo apt install docker.io`
    - 3. Install docker-compose: `sudo apt install docker-compose`
  - o On Windows/Mac (<http://www.docker.com>)

## JENKINS BUILD SCRIPT

The whole build script is inside a Jenkinsfile that has different stages to build and test all the different microservices.

- On the first stage, we start by building all the micro services.
- On the second stage, we build and run a docker image.
- Then, we wait and make sure the docker image is up before running our tests.
- After that, we run the Junit and Cucumber tests for each of the services.
- And finally, we clean and take down image.

## NEEDED SCRIPTS

Clone the repository:

```
git clone https://gitlab.gbar.dtu.dk/s192675/02267-microservices.git
```

```
cd 02267-microservices
```

**Run each of the microservices:**

```
mvn -f CustomerMicroservice/pom.xml -D maven.test.skip=true install
mvn -f MerchantMicroservice/pom.xml -D maven.test.skip=true install
mvn -f TokenMicroservice/pom.xml -D maven.test.skip=true install
mvn -f TransactionMicroservice/pom.xml -D maven.test.skip=true install
mvn -f DTUPay/pom.xml -D maven.test.skip=true install
```

**All this above can be done using the following script file:**

```
clean_compile_install_all.sh
```

**Generate the docker images for each of the microservices:**

```
docker-compose build
docker-compose up -d
```

**Run tests on all the services:**

```
mvn -f CustomerMicroservice/pom.xml test
mvn -f MerchantMicroservice/pom.xml test
mvn -f TokenMicroservice/pom.xml test
```

**Delete the docker images:**

```
docker-compose down
docker-image prune -f
```

## **INFORMATION ON SOFTWARE TOOLS USED FOR DEVELOPMENT**

- IntelliJ (2019.3.1)
- Maven (3.6.3)
- Cucumber (1.2.5)
- JUnit (4.12)
- MySQL (8.0.18)
- Thorntail (2.6.0.Final)
- Jersey (2.27)
- Org.json (20190722)