

Assignment:
Module 8: Docker with Microservices
using Springboot - II

1. Created studentms app and generated jar

```
labuser@ip-172-31-27-88:~/Documents$ ls -lrt
total 38132
drwxrwxr-x 3 labuser labuser 4096 Feb 17 2022 workspace-spring-tool-suite-4-4.13.1.RELEASE
-rw-rw-r-- 1 labuser labuser 182 Oct 25 04:01 Dockerfile
drwxr-xr-x 6 labuser labuser 4096 Oct 25 04:07 studentms
-rw-rw-r-- 1 labuser labuser 39033930 Oct 25 04:07 studentms-1.0.jar
labuser@ip-172-31-27-88:~/Documents$
```

2. created Docker file

```
FROM openjdk:8-jdk-alpine
VOLUME /tmp
ARG JAR_FILE
COPY ${JAR_FILE} studentms.jar
ENTRYPOINT ["java", "-Djava.security.edg=file:/dev/./urandom", "-jar", "studentms.jar"]
EXPOSE 1111
```

3. Build the docker image

```
docker build -t studentms --build-arg JAR_FILE="studentms-1.0.jar" .
```

```
labuser@ip-172-31-27-88:~/Documents$ docker build -t studentms --build-arg JAR_FILE="studentms-1.0.jar" .
Sending build context to Docker daemon 280.4MB
Step 1/6 : FROM openjdk:8-jdk-alpine
--> a3562aa0b991
Step 2/6 : VOLUME /tmp
--> Using cache
--> dd81d3894f23
Step 3/6 : ARG JAR_FILE
--> Using cache
--> aca92930c8e2
Step 4/6 : COPY ${JAR_FILE} studentms.jar
--> Using cache
--> ca41f8931a5b
Step 5/6 : ENTRYPOINT ["java", "-Djava.security.edg=file:/dev/./urandom", "-jar", "studentms.jar"]
--> Using cache
--> c5ec7c7a783b
Step 6/6 : EXPOSE 1111
--> Using cache
--> bb87d99fe6c1
Successfully built bb87d99fe6c1
Successfully tagged studentms:latest
labuser@ip-172-31-27-88:~/Documents$
```

4. Check docker image created

```
labuser@ip-172-31-27-88:~/Documents$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
studentms	latest	bb87d99fe6c1	6 minutes ago	144MB
<none>	<none>	0591ef245768	13 minutes ago	144MB
<none>	<none>	d94ec5a6b6b1	19 minutes ago	144MB
<none>	<none>	946d8dcb46e3	45 minutes ago	422MB
<none>	<none>	b61d5e1bce14	About an hour ago	383MB
ubuntu	latest	216c552ea5ba	2 weeks ago	77.8MB
hello-world	latest	feb5d9fea6a5	13 months ago	13.3kB
openjdk	8-jdk-alpine	a3562aa0b991	3 years ago	105MB

```
labuser@ip-172-31-27-88:~/Documents$
```

5. Run the docker image container

docker run studentms

```
Labuser@ip-172-31-27-88:~/Documents$ docker run studentms

:: Spring Boot ::
( v2.7.5 )

2022-10-25 04:17:58.749 INFO 1 --- [
t in /)
2022-10-25 04:17:58.754 INFO 1 --- [
main] com.eduxcel.StudentmsApplication : Starting StudentmsApplication v1.0 using Java 1.8.0_212 on 1c1f4e63c72c with PID 1 (/studentms.jar started by roo
2022-10-25 04:17:59.965 INFO 1 --- [
main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2022-10-25 04:18:00.049 INFO 1 --- [
main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 68 ms. Found 1 JPA repository interfaces.
2022-10-25 04:18:01.016 INFO 1 --- [
main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat: initialized with port(s): 8080 (http)
2022-10-25 04:18:01.038 INFO 1 --- [
main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2022-10-25 04:18:01.038 INFO 1 --- [
main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.68]
2022-10-25 04:18:01.206 INFO 1 --- [
main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2022-10-25 04:18:01.207 INFO 1 --- [
main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 2322 ms
2022-10-25 04:18:01.269 INFO 1 --- [
main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2022-10-25 04:18:01.798 INFO 1 --- [
main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2022-10-25 04:18:01.823 INFO 1 --- [
main] o.s.b.a.h2.H2ConsoleAutoConfiguration : H2 console available at '/h2-console'. Database available at 'jdbc:h2:mem:testdb'
2022-10-25 04:18:02.127 INFO 1 --- [
main] o.hibernate.jpa.internal.util.LogHelper : HH0000204: Processing PersistenceUnitInfo [name: default]
2022-10-25 04:18:02.200 INFO 1 --- [
main] org.hibernate.Version : HH0000412: Hibernate ORM core version 5.6.12.Final
2022-10-25 04:18:02.449 INFO 1 --- [
main] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations {5.1.2.Final}
2022-10-25 04:18:02.631 INFO 1 --- [
main] org.hibernate.dialect.Dialect : HH0000400: Using dialect: org.hibernate.dialect.H2Dialect
2022-10-25 04:18:03.449 INFO 1 --- [
main] o.h.e.t.j.p.i.JtaPlatformInitiator : HH0000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatfor
m]
2022-10-25 04:18:03.460 INFO 1 --- [
main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2022-10-25 04:18:03.956 WARN 1 --- [
main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering
. Explicitly configure spring.jpa.open-in-view to disable this warning
2022-10-25 04:18:04.445 INFO 1 --- [
main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path ''
2022-10-25 04:18:04.460 INFO 1 --- [
main] com.eduxcel.StudentmsApplication : Started StudentmsApplication in 6.531 seconds (JVM running for 7.29)
```

6. Testing

studentms / students Copy

GET

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http://172.17.0.2:8080/students

ParamsAuthorizationHeaders (6)BodyPre-request ScriptTestsSettings

Query Params

	KEY	VALUE
	Key	Value

BodyCookiesHeaders (5)Test Results

PrettyRawPreviewVisualizeJSON⌵⌵

```
1 {
2   "studentid": 1,
3   "studentname": "Ramesh",
4   "coursename": "Btech",
5   "deptid": "Engineering"
6 }
7
8
```