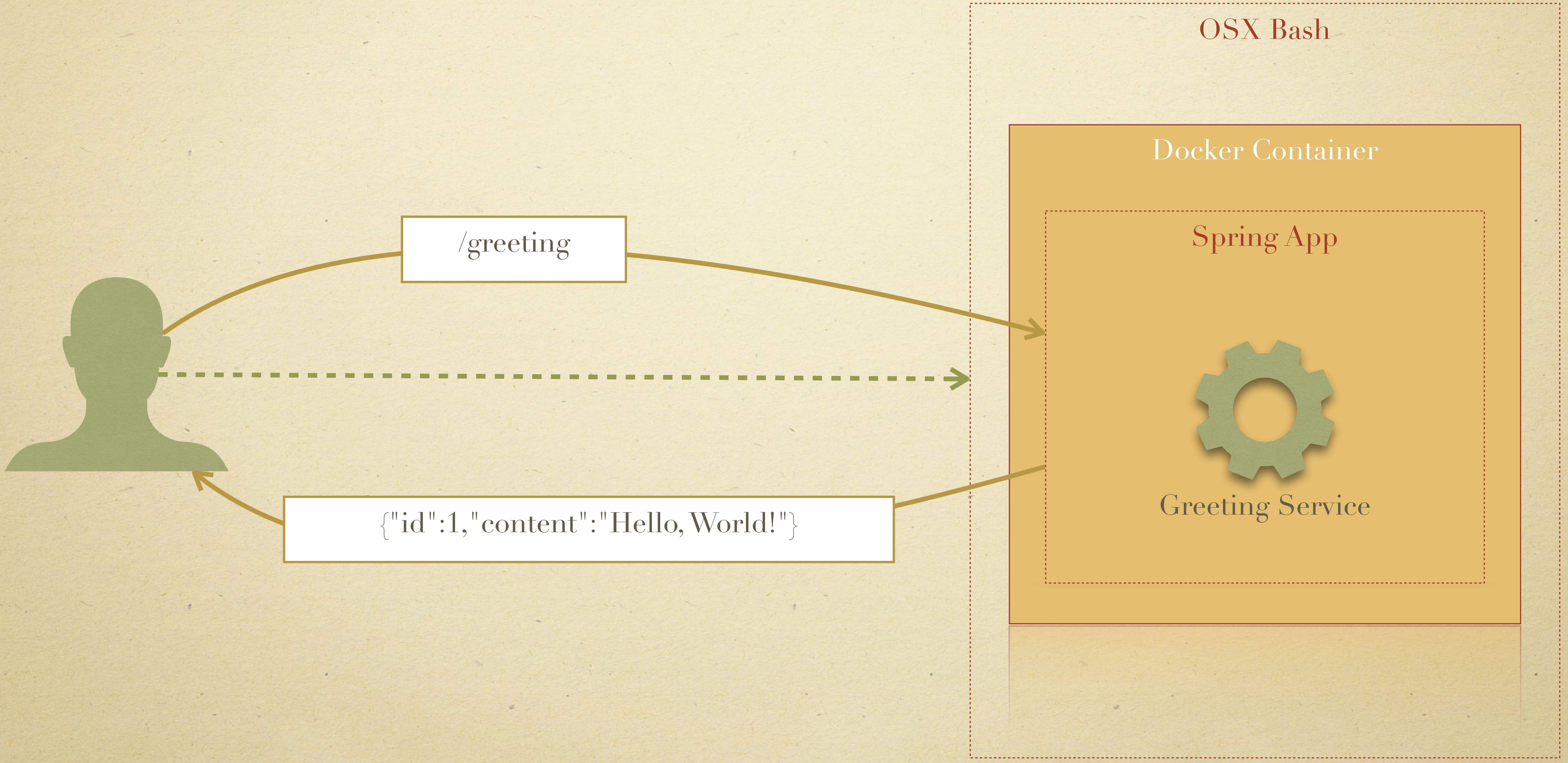
July 6, 2019

Simple Rest Service

nano | 1

Big Picture


OSX Bash
Docker Container
Spring App
/greeting
Greeting Service
{"id":1,"content":"Hello, World!"}

Step 0: Prerequisites

- Java 1.8+

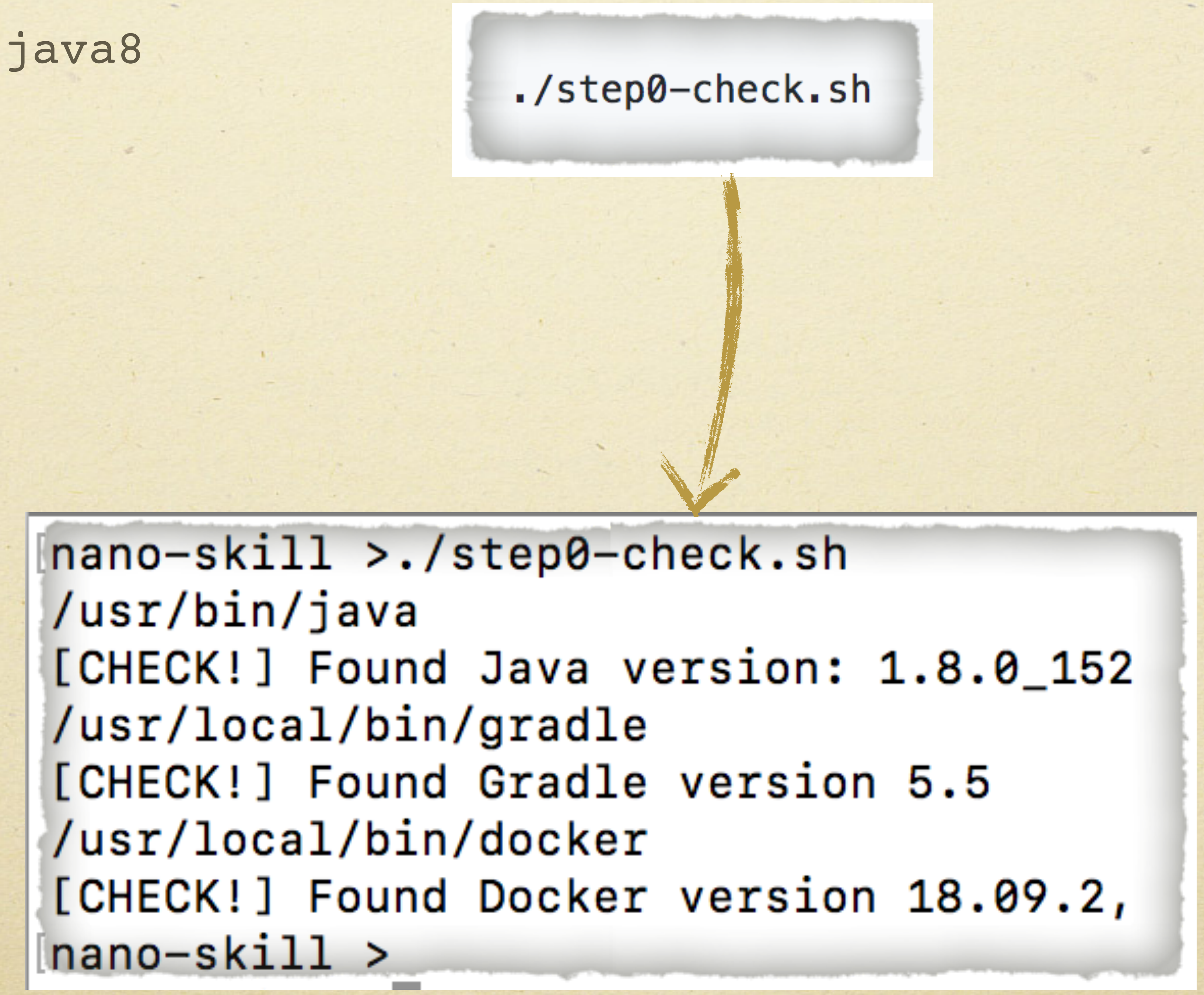
```
brew tap caskroom/cask
brew cask install caskroom/versions/java8
```

- Gradle 4+

```
brew install gradle
```

- Docker 18+

```
brew tap caskroom/cask
brew cask install docker
```



```
./step0-check.sh
```

```
nano-skill >./step0-check.sh
/usr/bin/java
[CHECK!] Found Java version: 1.8.0_152
/usr/local/bin/gradle
[CHECK!] Found Gradle version 5.5
/usr/local/bin/docker
[CHECK!] Found Docker version 18.09.2,
nano-skill >
```

Java: Installing JDK on Mac using Homebrew

Oct 14, 2018

https://www.chrisjmendez.com/2018/10/14/how-to-install-java-on-osx-using-homebrew/

CODE2BITS

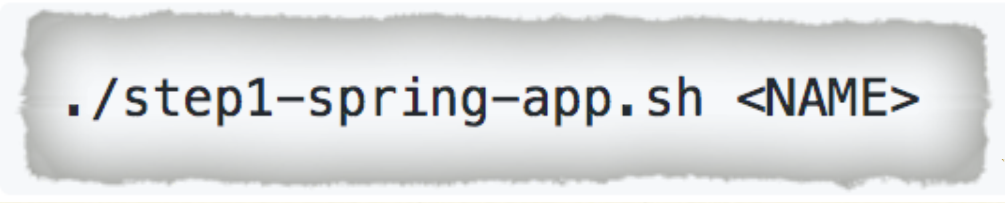
https://www.code2bits.com/how-to-install-gradle-on-macos-using-homebrew/

CODE2BITS

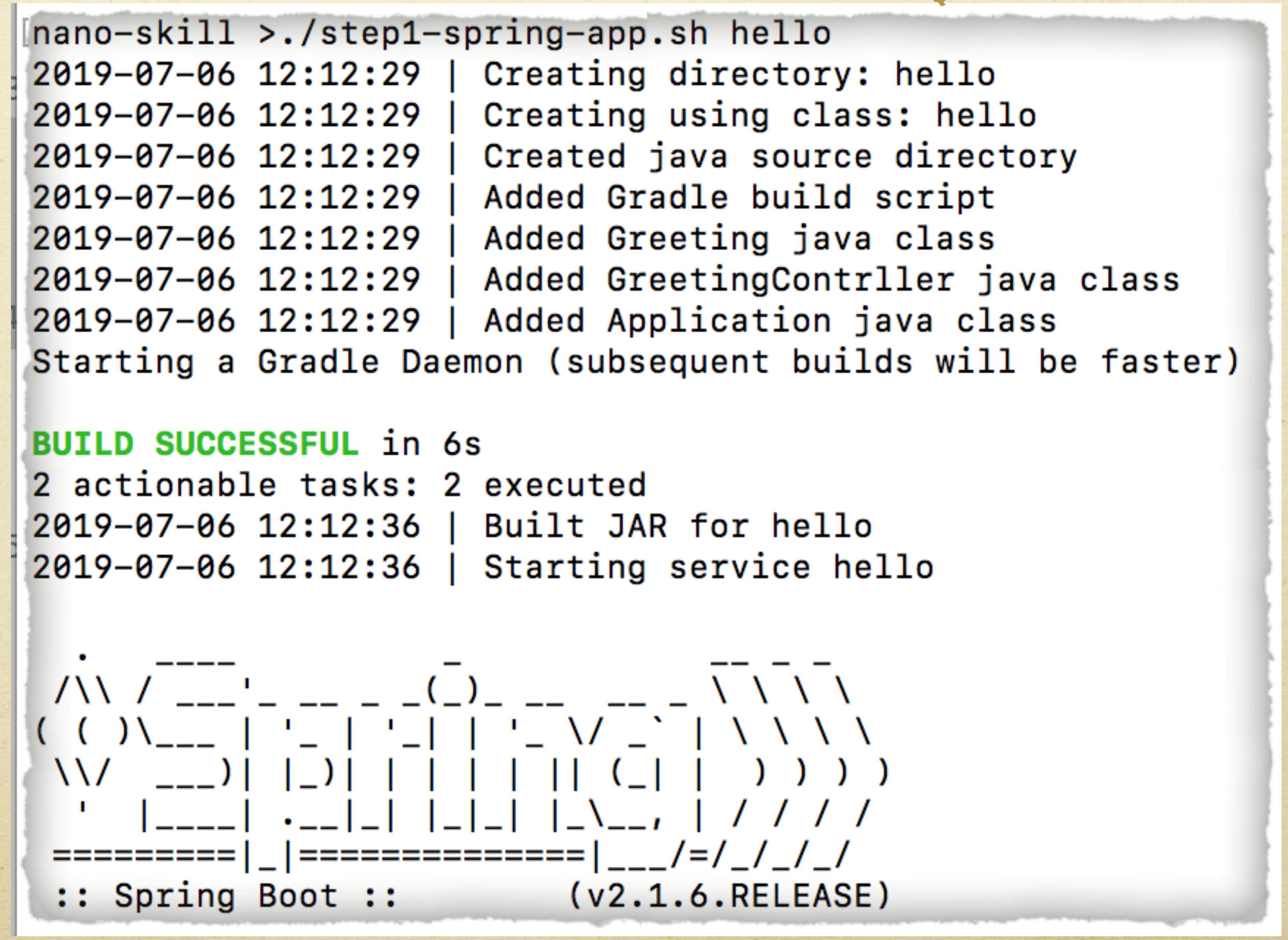
https://www.code2bits.com/how-to-install-docker-on-macos-using-homebrew/

Step 1: Spring App

- Create project directory
- Add Gradle Build file
- Add Greeting Class
- Add GreetingController Class
- Add Main Application Class
- Built
- Run



```
./step1-spring-app.sh <NAME>
```



```
nano-skill >./step1-spring-app.sh hello
2019-07-06 12:12:29 | Creating directory: hello
2019-07-06 12:12:29 | Creating using class: hello
2019-07-06 12:12:29 | Created java source directory
2019-07-06 12:12:29 | Added Gradle build script
2019-07-06 12:12:29 | Added Greeting java class
2019-07-06 12:12:29 | Added GreetingContrller java class
2019-07-06 12:12:29 | Added Application java class
Starting a Gradle Daemon (subsequent builds will be faster)

BUILD SUCCESSFUL in 6s
2 actionable tasks: 2 executed
2019-07-06 12:12:36 | Built JAR for hello
2019-07-06 12:12:36 | Starting service hello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 :: Spring Boot ::        (v2.1.6.RELEASE)
```
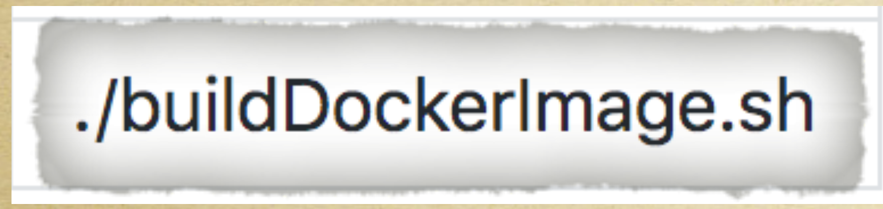

spring by Pivotal

https://spring.io/guides/gs/rest-service/

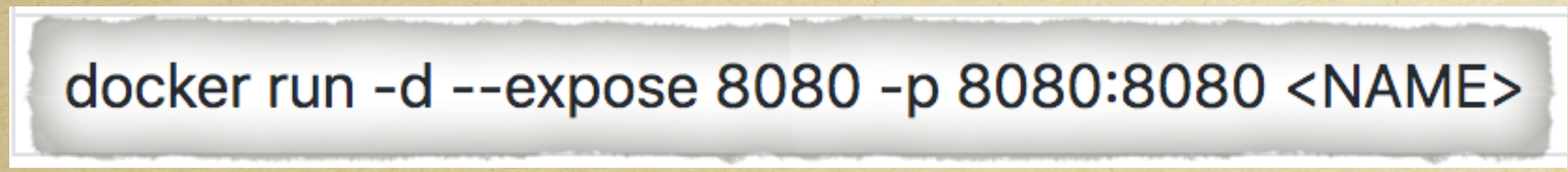
Step 2: Docker

- Create **Dockerfile**
- Create Docker Build file
- Build Docker Image

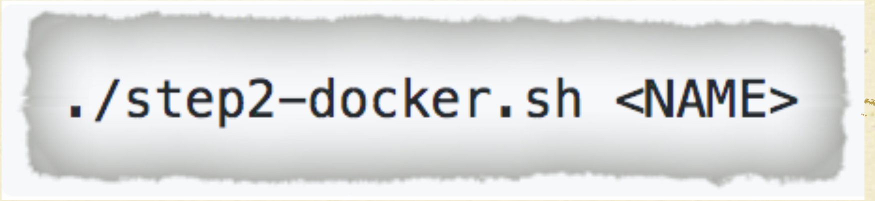


```
./buildDockerImage.sh
```

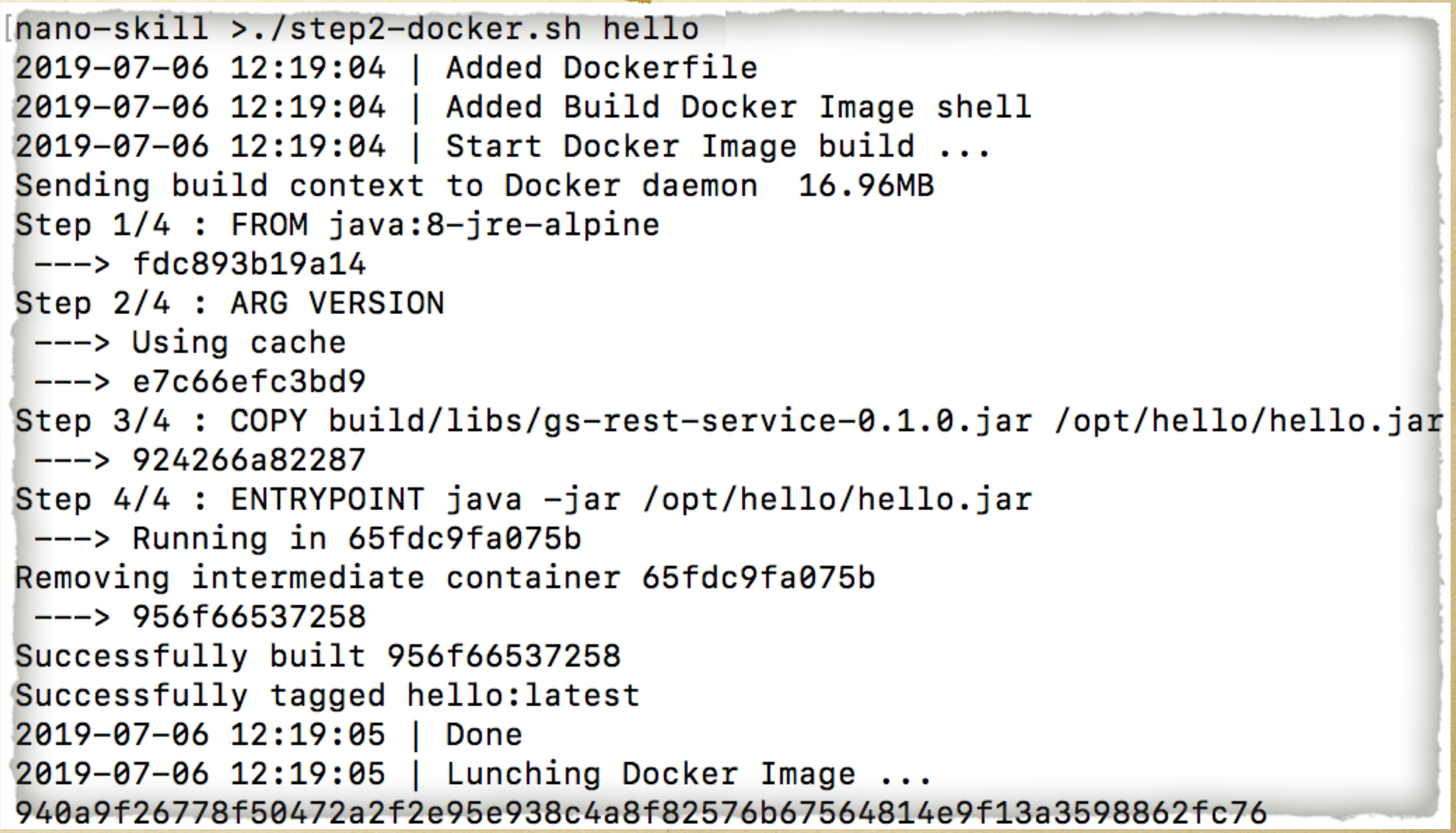
- Run



```
docker run -d --expose 8080 -p 8080:8080 <NAME>
```



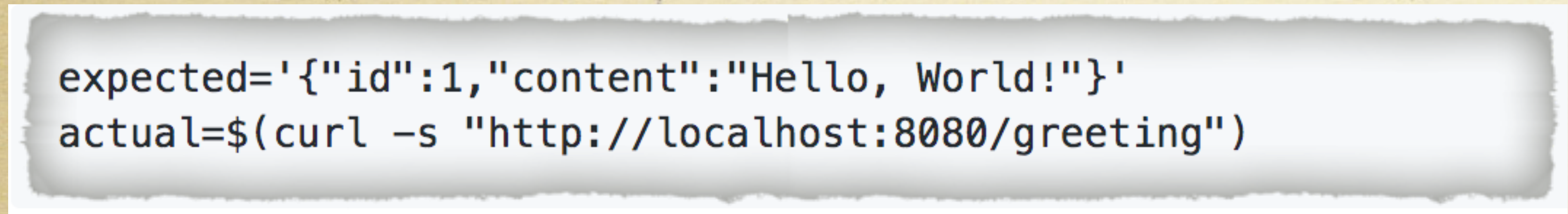
```
./step2-docker.sh <NAME>
```



```
nano-skill >./step2-docker.sh hello
2019-07-06 12:19:04 | Added Dockerfile
2019-07-06 12:19:04 | Added Build Docker Image shell
2019-07-06 12:19:04 | Start Docker Image build ...
Sending build context to Docker daemon  16.96MB
Step 1/4 : FROM java:8-jre-alpine
 ---> fdc893b19a14
Step 2/4 : ARG VERSION
 ---> Using cache
 ---> e7c66efc3bd9
Step 3/4 : COPY build/libs/gs-rest-service-0.1.0.jar /opt/hello/hello.jar
 ---> 924266a82287
Step 4/4 : ENTRYPOINT java -jar /opt/hello/hello.jar
 ---> Running in 65fdc9fa075b
Removing intermediate container 65fdc9fa075b
 ---> 956f66537258
Successfully built 956f66537258
Successfully tagged hello:latest
2019-07-06 12:19:05 | Done
2019-07-06 12:19:05 | Lunching Docker Image ...
940a9f26778f50472a2f2e95e938c4a8f82576b67564814e9f13a3598862fc76
```

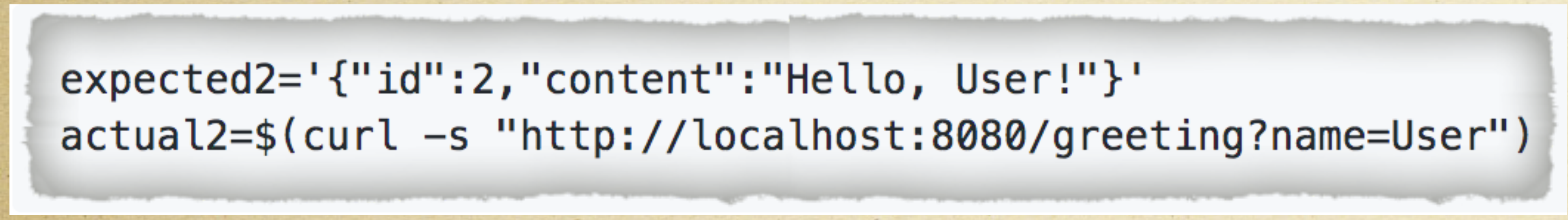
Test Use-cases

- Default Greeting



```
expected='{"id":1,"content":"Hello, World!"}'
actual=$(curl -s "http://localhost:8080/greeting")
```

- Customer Greeting



```
expected2='{"id":2,"content":"Hello, User!"}'
actual2=$(curl -s "http://localhost:8080/greeting?name=User")
```