Advanced Software Engineering – Fall 2017 lab – Homework 6

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a. Contents of the submission

- doodle.yaml
- doodle.completed.yaml
- doodle.zip
- scripts
 - o create_doodle.sh
 - o delete_doodle.sh

 - start_doodle.shstop.doodle.sh
- report.pdf (this file)

b. Quick rundown of the submission

The doodle.yaml file has been completed with the description of the topology; the doodle will run on an host that runs Maven (ver. >= 3.0) and Java (at least v. 1.8) and will expose port 8080 to the external, connecting it to port 8080 of the container.

The create_doodle.sh script unzips the Doodle primer and invokes the Maven packaging option after moving into the unzipped folder.

The start_doodle.sh script moves into the Doodle primer folder and executes the jar created by Maven.

The stop_doodle.sh script retrieves the process ID (PID) of the Java virtual machine and kills it. The delete_doodle.sh script deletes the Doodle primer folder.

c. Step-by-step simulation

1. EXECUTION OF TOSKERISER

```
oleombruni@host-131-114-214-129:~/ase$ toskerise doodle.yaml --policy size
founded 116 images for "doodle" node
complete node "doodle" with image "frekele/maven:3.3.3-jdk8u51" (247.45 MB, 116382 pulls, 13 sta
rs)
```

2. DIFF BETWEEN DOODLE.YAML AND DOODLE.COMPLETED.YAML

```
oleombruni@host-131-114-214-129:~/ase$ diff doodle.yaml doodle.completed.yaml
9c9
- tosker: https://di-unipi-socc.github.io/tosker-types/tosker.yaml
> - tosker: https://di-unipi-socc.github.io/tosker-types/tosker.yaml
27c27
                - 8080: { get_input: port }
                - 8080: {get_input: port}
30a31
            node: doodle_container
36c37
                code: { get_artifact: [ SELF, doodle_code ] }
                code: {get_artifact: [SELF, doodle_code]}
42044,66
      doodle_container:
        type: tosker.nodes.Container
        properties:
          supported_sw:
            perl: 5.24.1
            java: 1.8.0
curl: 7.52.1
            nano: 2.7.4
            mvn: 3.3.3
unzip: '6.00'
erl: '2'
            wget: '1.18'
            bash: 4.4.12
            tar: '1.29'
          os_distribution: Debian GNU/Linux 9 (stretch)
            8080:
              get_input: port
        artifacts:
          my_image:
            file: frekele/maven:3.3.3-jdk8u51
            type: tosker.artifacts.Image
            repository: docker_hub
```

3. Tosker Create and Tosker Ls

```
oleombruni@host-131-114-214-129:~/ase$ tosker doodle.completed.yaml create
update memory ok

✓ Create network... Done

✓ Create doodle_container (container)... Done

✓ Create doodle (software)... Done

[oleombruni@host-131-114-214-129:~/ase$ tosker ls
update memory ok
Application
                  Component
                                    Type
                                               State
                                                        Full name
doodle.completed doodle_container Container created doodle.completed.doodle_container
doodle.completed doodle
                                    Software
                                              created doodle.completed.doodle
```

4. Tosker Create Logs (Begin/end)

```
dle_Primer$ tosker log doodle.completed.doodle create
update memory ok
+ unzip /tmp/dt/doodle/doodle.zip
Archive: /tmp/dt/doodle/doodle.zip
   creating: doodle/
  inflating: doodle/.gitignore
  inflating: doodle/doodle.iml
  inflating: doodle/mvnw
  inflating: doodle/pom.xml
   creating: doodle/src/
   creating: doodle/src/main/
   creating: doodle/src/main/java/
   creating: doodle/src/main/java/di/
creating: doodle/src/main/java/di/unipi/
   creating: doodle/src/main/java/di/unipi/ase/
   creating: doodle/src/main/java/di/unipi/ase/doodle/
  inflating: doodle/src/main/java/di/unipi/ase/doodle/Doodle.java
  inflating: doodle/src/main/java/di/unipi/ase/doodle/DoodleApplication.java
  inflating: doodle/src/main/java/di/unipi/ase/doodle/DoodleController.java
  inflating: doodle/src/main/java/di/unipi/ase/doodle/Vote.java
   creating: doodle/src/main/resources/
 extracting: doodle/src/main/resources/application.properties
   creating: doodle/src/main/resources/static/
   creating: doodle/src/main/resources/templates/
   creating: doodle/src/test/
   creating: doodle/src/test/java/
   creating: doodle/src/test/java/di/
creating: doodle/src/test/java/di/unipi/
   creating: doodle/src/test/java/di/unipi/ase/
  creating: doodle/src/test/java/di/unipi/ase/doodle/
inflating: doodle/src/test/java/di/unipi/ase/doodle/DoodleApplicationTests.jav
+ cd doodle
+ mvn package
[INFO] Scanning for projects...
Downloading: https://repo.maven.apache.org/maven2/org/springframework/boot/sprin
g-boot-starter-parent/1.5.7.RELEASE/spring-boot-starter-parent-1.5.7.RELEASE.pom
3/8 KB
5/8 KB
```

```
2172/2204 KB
2176/2204 KB
2188/2204 KB
2184/2204 KB
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2004/
```

5. Tosker Start

```
loleombruni@host-131-114-214-129:~/ase$ tosker doodle.completed.yaml start
update memory ok

✓ Start doodle_container (container)... Done

✓ Start doodle (software)... Done
```

6. Tosker Start Logs (Begin/END)

```
"{[/doodles/{id}/vote],methods=[PUT]}" onto public java.lang.String di.unipi.ase.doodle.
DoodleController.vote(int,di.unipi.ase.doodle.Vote)
2017-11-28 13:02:01.234 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping :
Mapped "{[/doodles/{id}/vote/{name}],methods=[GET]}" onto public java.lang.String di.unipi.ase.
doodle.DoodleController.getVote(int,java.lang.String)
2017-11-28 13:02:01.235 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping :
Mapped "{[/doodles/{id}/vote/{name}],methods=[POST]}" onto public java.lang.String di.unipi.ase
.doodle.DoodleController.updateVote(int,di.unipi.ase.doodle.Vote)
2017-11-28 13:02:01.235 INFO 8 --- [
2017-11-28 13:02:01.235 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "{[/doodles/{id}/vote/{name}],methods=[DELETE]}" onto public void di.unipi.ase.doodle.Do
odleController.deleteVote(int,java.lang.String)
2017-11-28 13:02:01.236 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "{[/doodles],methods=[PUT]}" onto public long di.unipi.ase.doodle.DoodleController.creat
                                                            main] s.w.s.m.m.a.RequestMappingHandlerMapping :
eDoodle(di.unipi.ase.doodle.Doodle)
2017-11-28 13:02:01.238 INFO 8 --- [
                                                             main] s.w.s.m.m.a.RequestMappingHandlerMapping
 Mapped "{[/doodles],methods=[GET]}" onto public java.util.HashMap<java.lang.Integer, di.unipi.a
se.doodle.Doodle> di.unipi.ase.doodle.DoodleController.getDoodles()
2017-11-28 13:02:01.241 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping
 Mapped "{[/error],produces=[text/html]}" onto public org.springframework.web.servlet.ModelAndVi
ew org.springframework.boot.autoconfigure.web.BasicErrorController.errorHtml(javax.servlet.http.
HttpServletRequest, javax.servlet.http.HttpServletResponse)
2017-11-28 13:02:01.242 INFO 8 --- [ main] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped "{[/error]}" onto public org.springframework.http.ResponseEntity<java.util.Map<java.lang
 .String, java.lang.Object>> org.springframework.boot.autoconfigure.web.BasicErrorController.erro
r(javax.servlet.http.HttpServletRequest)
2017-11-28 13:02:01.271 INFO 8 --- [
                                                             main] o.s.w.s.handler.SimpleUrlHandlerMapping
 Mapped URL path [/webjars/**] onto handler of type [class org.springframework.web.servlet.resou
rce.ResourceHttpRequestHandler]
2017-11-28 13:02:01.271 INFO 8 --- [
                                                             main] o.s.w.s.handler.SimpleUrlHandlerMapping
 Mapped URL path [/**] onto handler of type [class org.springframework.web.servlet.resource.Reso
urceHttpRequestHandler]
2017-11-28 13:02:01.307 INFO 8 --- [
                                                             main] o.s.w.s.handler.SimpleUrlHandlerMapping
 Mapped URL path [/**/favicon.ico] onto handler of type [class org.springframework.web.servlet.r
esource.ResourceHttpRequestHandler]
2017-11-28 13:02:01.547 INFO 8 --- [
                                                             main] o.s.j.e.a.AnnotationMBeanExporter
Registering beans for JMX exposure on startup
2017-11-28 13:02:01.607 INFO 8 --- [
                                                             main] s.b.c.e.t.TomcatEmbeddedServletContainer :
 Tomcat started on port(s): 8080 (http)
2017-11-28 13:02:01.613 INFO 8 --- [
                                                             main] di.unipi.ase.doodle.DoodleApplication
 Started DoodleApplication in 3.739 seconds (JVM running for 4.288)
```

7. Tosker LS (After Starting)

```
| Coleombruni@host-131-114-214-129:~/ase$ tosker ls | update memory ok | Application | Component | Type | State | Full name | doodle.completed | doodle_container | doodle.completed | doodle_container | doodle.completed | doodle_container | doodle.completed | doodle_container | doodle.completed.doodle | doodle | doo
```

8. TOSKER STOP

```
Doodle_Primer$ tosker doodle.completed.yaml stop update memory ok

✓ Stop doodle (software)... Done

✓ Stop doodle_container (container)... Done
```

9. Tosker Stop Logs

```
Doodle_Primer$ tosker log doodle.completed.doodle stop
update memory ok
+ pidof java
+ PID=6
+ kill -9 6
```

10. Tosker LS (After Stopping)

11. TOSKER DELETE

```
Doodle_Primer$ tosker doodle.completed.yaml delete update memory ok

✓ Delete doodle (software)... Done

✓ Delete doodle_container (container)... Done

✓ Delete network... Done
```

12. TOSKER LS (AFTER DELETING)

```
[oleombruni@host-131-114-214-129:~/ase$ tosker ls update memory ok Application Component Type State Full name
```