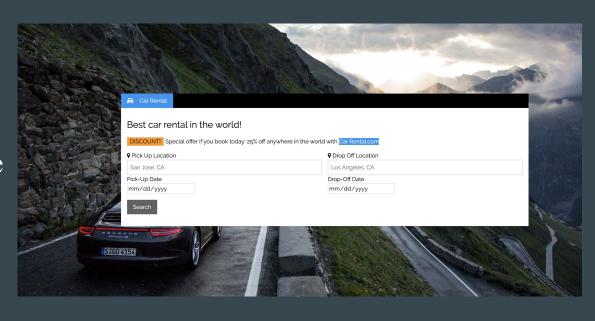
# Car Rental System

•••

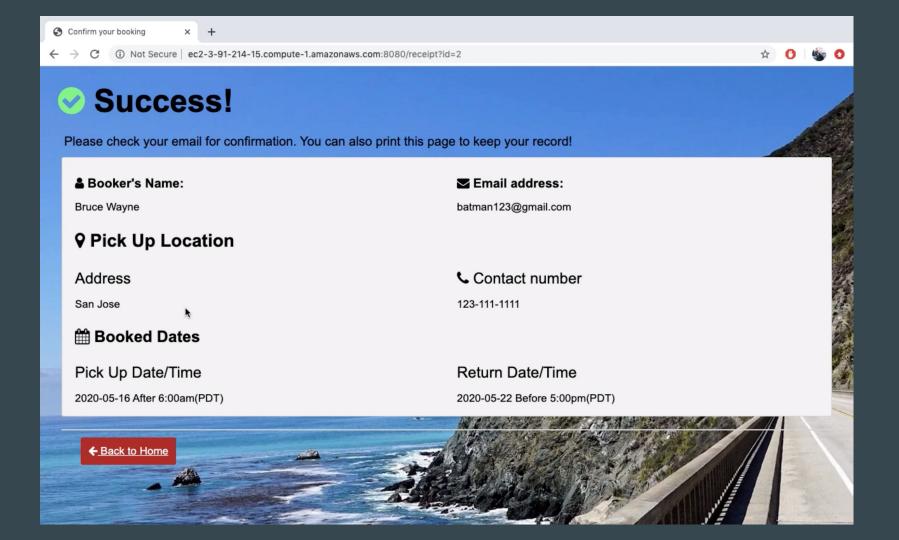
CMPE 172 - Enterprise Software Team 5: Dylan Zhang, En-Ping Shih, Tsz Hin Chan

## Project Overview

- Car Rental System to run queries to track statistics and recurrence of check out cars.
- Users are able to pick the location and date they want to rent/return the car.
- Users are able to track their rental history.



Present by Dylan Zhang



# Project Description

The car rental platform has become an exciting startup option and has a place in the world. Users who want to rent a car can search for the car according to their needs and rent the car after providing the necessary details and payment. The goal of our project is that the process of registering a "car rental" takes only a few seconds. The user only needs to fill in personal information and select a car(s) to fulfil the entire process.

Present by Dylan Zhang

## Components used

• HTML (Thymeleaf), CSS, JavaScript (UI)



Java - Spring boot



• AWS - EC2



• AWS RDS - MySQL

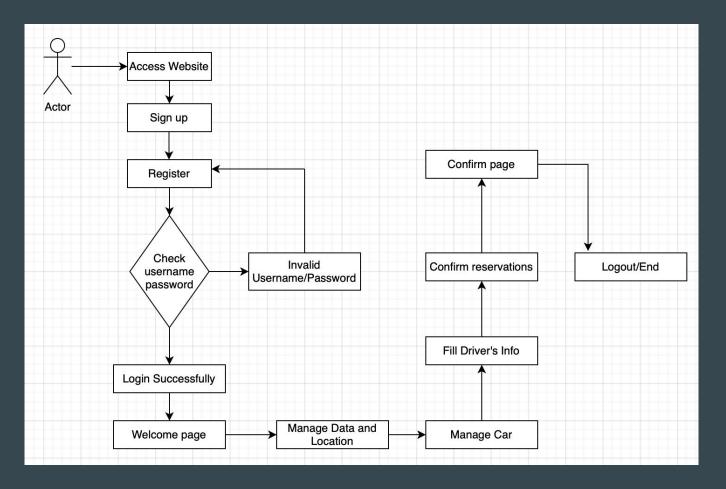


Docker



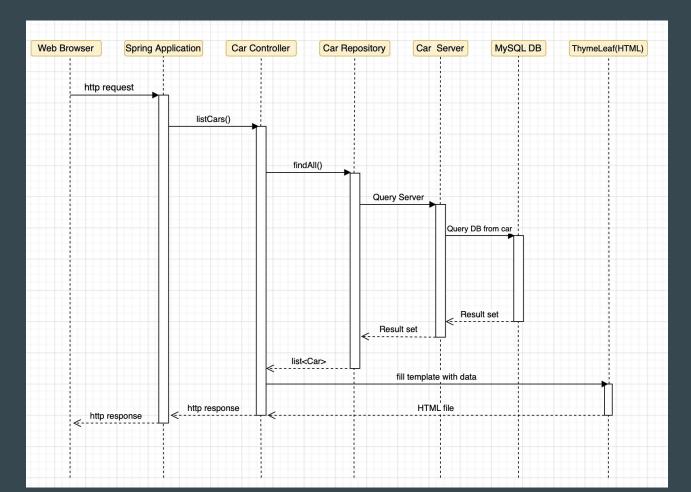
Present by Dylan Zhang

#### System Diagram: Car Rental Diagram Template



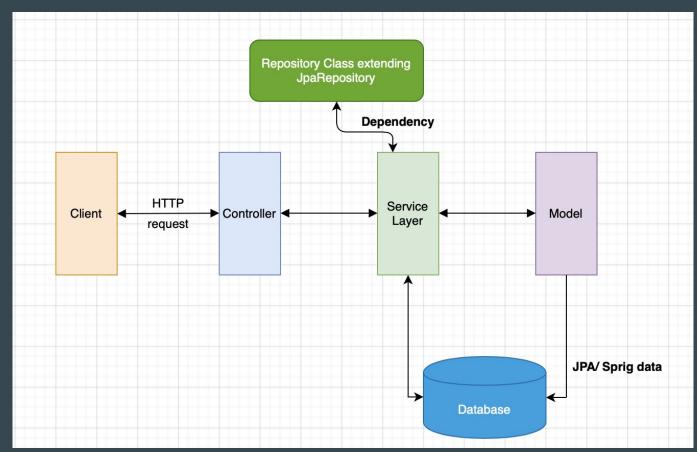
Present by Dylan Zhang

#### Sequence Diagram: Car Rental Processing Request Template(UML)

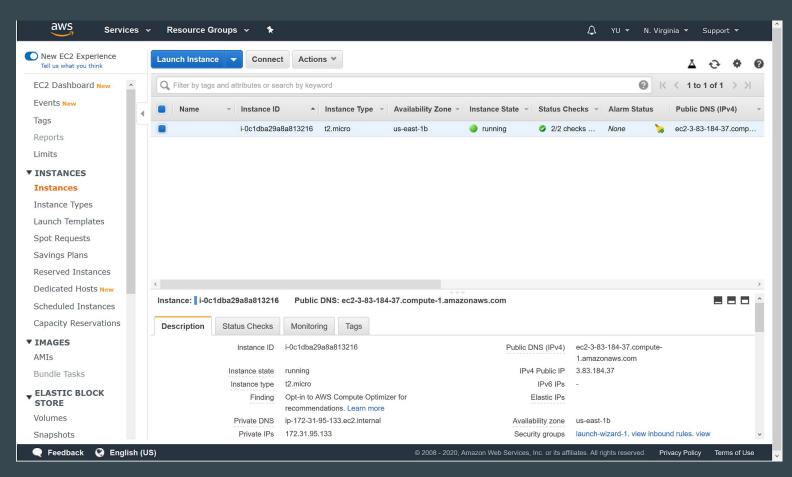


Present by Dylan Zhang

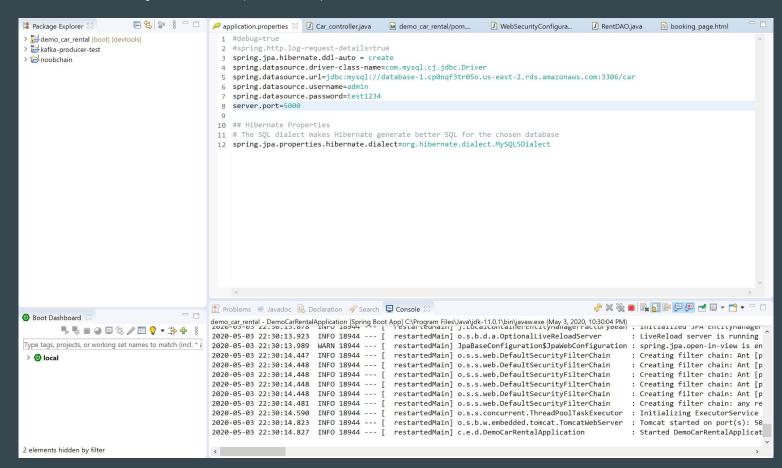
# Spring Boot Structure



#### AWS - EC2



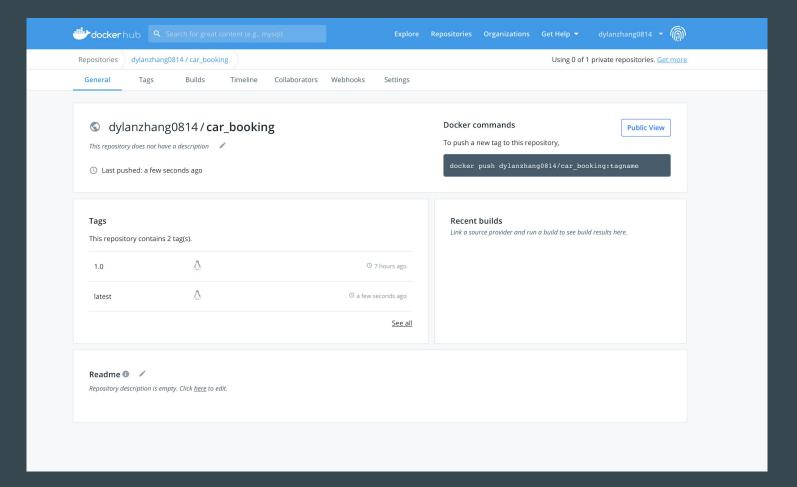
### RDS - MySQL (AWS)



#### Docker

```
💿 🌑 📦 🛅 Desktop — ec2-user@ip-172-31-95-133:~/demo_car_rental — ssh -i cmpe172.pem ec2-user@ec2-3-83-184-37.compute-1.amazonaws.com — 139...
containerd version: ff48f57fc83a8c44cf4ad5d672424a98ba37ded6
runc version: dc9208a3303feef5b3839f4323d9beb36df0a9dd
 init version: fec3683
Security Options:
 seccomp
  Profile: default
 Kernel Version: 4.14.173-137.229.amzn2.x86 64
Operating System: Amazon Linux 2
OSType: linux
Architecture: x86_64
CPUs: 1
Total Memory: 983.4MiB
Name: ip-172-31-95-133.ec2.internal
ID: 6DGS:DNB6:73QM:OECJ:JHS2:NN7R:TWDN:C7UP:DRM7:REJS:YBGZ:4KQ6
Docker Root Dir: /var/lib/docker
Debug Mode: false
Registry: https://index.docker.io/v1/
Labels:
Experimental: false
Insecure Registries:
 127.0.0.0/8
Live Restore Enabled: false
[[ec2-user@ip-172-31-95-133 ~]$ build -t cmpe172/carbooking
-bash: build: command not found
[ec2-user@ip-172-31-95-133 ~]$ ls
demo_car_rental java-11-amazon-corretto-devel-11.0.4.11-1.x86_64.rpm
[ec2-user@ip-172-31-95-133 ~]$ cd demo car rental
[[ec2-user@ip-172-31-95-133 demo_car_rental]$ docker build -t cmpe172/carbooking
"docker build" requires exactly 1 argument.
See 'docker build --help'.
Usage: docker build [OPTIONS] PATH | URL | -
Build an image from a Dockerfile
[[ec2-user@ip-172-31-95-133 demo_car_rental]$ sudo_docker_build_-t_carbooking:1.0 .
Sending build context to Docker daemon 44.82MB
Error response from daemon: Dockerfile parse error line 1: FROM requires either one or three arguments
[[ec2-user@ip-172-31-95-133 demo_car_rental]$ sudo docker build -t carbooking:1.0 .
Sending build context to Docker daemon 44.82MB
Step 1/3 : FROM amazoncorretto:11
11: Pulling from library/amazoncorretto
a3f8e652bdc4: Pull complete
d195fe3929b2: Pull complete
Digest: sha256:23b3da2fac66d1802226298da373a6c5d1560a621309c7dd2c72a7e26686190f
Status: Downloaded newer image for amazoncorretto:11
---> dcce9e8293ec
Step 2/3 : COPY target/demo_car_rental-0.0.1-SNAPSHOT.jar app.jar
---> 70e5baa0ae0e
Step 3/3 : ENTRYPOINT ["java","-jar","/app.jar"]
---> Running in 758f0da33909
Removing intermediate container 758f0da33909
---> 95397471ac87
Successfully built 95397471ac87
Successfully tagged carbooking:1.0
[[ec2-user@ip-172-31-95-133 demo_car_rental]$ docker run -d -p 8080:8080 -t carbooking:1.0
6b0546e5f773e483afd693800e3237489875ce31574969169aa78a7ae60b52cf
[ec2-user@ip-172-31-95-133 demo car rental]$
```

#### Docker pull "dylanzhang0814/car\_booking:1.4"



#### Frontend - HTML

```
■ Project ▼
                                                   Car_controller.java >

dimport.sql 

x

                                                                                                                                                  # welcome_page.html × +
                                    - page.html
                                                                                       application.properties
                                                                                                              m pom.xml ×
                                                                                                                            abooking_page.html
                                                          alt="Title">
▼ land demo_car_rental ~/Desktop/Project-C
                                                         <img class="w3-image" src="/w3images/london2.jpg" alt="London" width="1500" height="700">-->
  ▶ ■ .idea
                                                     <div class="w3-display-middle" style="...">
  ▶ ■ .mvn
                                                         <div class="w3-bar w3-black">
  ▼ Isrc
                                                             <button class="w3-bar-item w3-button tablink" onclick="openLink(event, 'Car');"><i class="fa fa-car w3-marg</pre>
     ▼ I main
                                                                 <button class="w3-bar-item w3-button tablink" onclick="openLink(event, 'Hotel'):"><i class="fa fa-bed w</pre>
       ▼ lava
                                                                 <button class="w3-bar-item w3-button tablink" onclick="openLink(event, 'Car');"><i class="fa fa-car w3-</pre>
          ▼ com.example.demo car rer
                                                         </div>
            ▶ □ configuration
            ▶ □ controller
                                                         <div id="Car" class="w3-container w3-white w3-padding-16 myLink">
            ▶ b model
                                                             <h3>Best car rental in the world!</h3>
            ► Tepository
                                                             <span class="w3-tag w3-orange">DISCOUNT!</span> Special offer if you book today: 25% off anywhere in the
            ▶ □ service
                                                             <form action="#" th:action="@{/tempForm}" th:object="${tempRent}" method="post">
            DemoCarRentalApplication
                                                             <div class="w3-row-padding" style="...">
       ▼ la resources
                                                                 <div class="w3-half">
          ▶ static.img
                                                                     <label for="city"><i class="fa fa-map-marker"></i> Pick Up Location</label>
          ▼ lemplates
                                                                     <input class="w3-input w3-border" type="text" th:field="*{pickUp}" id="city" name="city" placeholde</pre>
                                                                 </div>
               # booking_page.html
                                                                 <div class="w3-half">
               # home_page.html
                                                                     <label for="city"><i class="fa fa-map-marker"></i> Drop Off Location</label>
               # login_page.html
                                                                     <input class="w3-input w3-border" type="text" th:field="*{drop0ff}" id="city" name="city" placehold</pre>
               # receipt page.html
                                                                 </div>
               a signup_page.html
                                                                 <div class="w3-half">
               # welcome_page.html
                                                                     <label class="pickup">Pick-Up Date</label><br>
            application.properties
                                                                     <input type="date" th:field="*{startDate}" class="form-control" name="start date" placeholder="Pick"</pre>
            import.sal
                                                                 </div>
     ▶ test
                                                                 <div class="w3-half">
                                                                     <label class="dropoff">Drop-Off Date</label><br>
                                                                     <input type="date" th:field="*{endDate}" class="form-control" name="end date" placeholder="Drop-off</pre>
     agitignore
                                                                 </div>
     demo car rental.iml
                                                             </div>
     ■ mvnw
                                                             <button class="w3-button w3-dark-grey" type="submit">Search</button>
     f mvnw.cmd
                                                             </form>
     m pom.xml
                                                         </div>
```

# Live Demo!

http://ec2-3-91-214-15.compute-1.amazonaws.com:8080/welcome

P.S. The Link is now **disabled** since we want to avoid any extra charges by the AWS. But it was running when we did the live demo in class. (5/4/2020)

#### Next Step

- Enable registration via social media accounts for quick registration.
- Forget/Reset password
- Profile page
- Add more cars
- Search by title Function
- Add customer service message box
- Debugging

#### Lessons Learned

- Spring boot
- AWS RDS
- AWS Cloud9
- Amazon Simple Storage Service (S3)
- RESTful Web Services
- Docker

#### Individual Contribution

- Frontend, UI Design
  - o En-Ping Shih
- Backend, Environment Setup, Server, Database
  - Dylan Zhang
  - o Tsz Hin Chan

# Thank You!

Any questions?