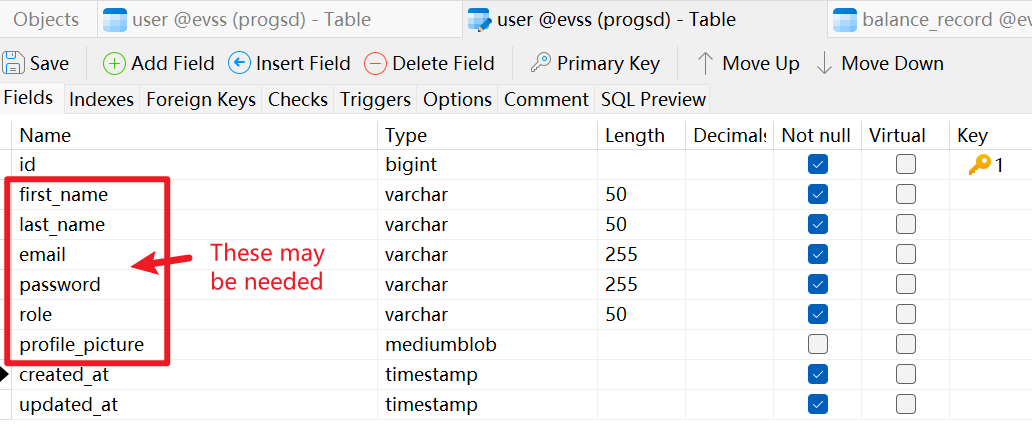
# User

User table reference:



FirstName: @NotNull @Size(min = 1, max = 50)

lastName: @NotNull @Size(min = 1, max = 50)

Email: @NotNull @Size(min = 1, max = 255)

Password: @NotNull @Size(min = 5, max = 255)

ProfilePicture: a file of picture

Add/(sign up) user:

|  |  |
| --- | --- |
| Api address | (http domain) /user/add |
| Request method | post |
| Required Parameters | User’s fields in the figure(profile\_picture is not necessary ) |
| return | 1.result(true or false) 2. errors or email error 3.user table(if success) |
|  |  |

Login user:

|  |  |
| --- | --- |
| Api address | (http domain) /user/login |
| Request method | post |
| Required Parameters | User: User’s email and password is needed |
| return | 1.result(true or false) 2. user table(if result is true) |
| example |  |

get user:

|  |  |
| --- | --- |
| Api address | (http domain) /user/login |
| Request method | get |
| Required Parameters | User: User’s email is needed |
| return | 1.result(true or false) 2. user table(if result is true) |
| example |  |

delete user:

|  |  |
| --- | --- |
| Api address | (http domain) /user/login |
| Request method | post |
| Required Parameters | User: User’s email is needed |
| return | 1.result(true or false) 2. user table(if result is true) |
| example |  |

update user:

|  |  |
| --- | --- |
| Api address | (http domain) /user/login |
| Request method | post |
| Required Parameters | User as json(email and other parameters needed to be updated) |
| return | 1.result(true or false) 2. user table(if result is true) |
| example |  |

# ORDER

Init order:

|  |  |
| --- | --- |
| Api address | (http domain) /order/init |
| Request method | post |
| Required Parameters | String email, long startTime, String sn |
| return | json map:  code  msg  data |
| example |  |

End order

|  |  |
| --- | --- |
| Api address | (http domain) /order/end |
| Request method | post |
| Required Parameters | String email, long endTime |
| return | json map:  code  msg  data |
| example |  |

Add location

|  |  |
| --- | --- |
| Api address | (http domain) /order/add/location |
| Request method | post |
| Required Parameters |  |
| return | json map:  code  msg  data |
| example |  |

Get all orders

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all |
| Request method | get |
| Required Parameters |  |
| return | json map:  code  msg  data |
| example |  |

Get orders by email

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all/email |
| Request method | get |
| Required Parameters | String email |
| return | json map:  code  msg  data |
| example |  |

Get the open order by email

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/open/email |
| Request method | get |
| Required Parameters | String email |
| return | json map:  code  msg  data |
| example |  |

Get all closed orders by email

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all/closed/email |
| Request method | get |
| Required Parameters | String email |
| return | json map:  code  msg  data |
| example |  |

Get orders by sn

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all/sn |
| Request method | get |
| Required Parameters | String sn |
| return | json map:  code  msg  data |
| example |  |

Get orders by sn

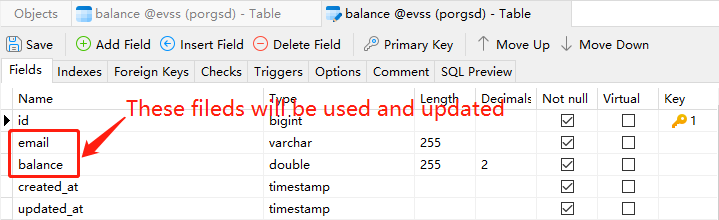
|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all/type |
| Request method | get |
| Required Parameters | Int type |
| return | json map:  code  msg  data |
| example |  |

Get orders by time range

|  |  |
| --- | --- |
| Api address | (http domain) /order/get/all/time |
| Request method | get |
| Required Parameters | long startTime, long endTime |
| return | json map:  code  msg  data |
| example |  |

# Balance

Balance table reference:



**Email:**

@NotNull  
 @Size(min = 1, max = 255)  
 @Column(nullable = **false**, unique = **true**)  
 @Pattern(regexp = **".+@.+\\.[a-z]+"**, message = **"invalid email format"**)

**Balance:**

@NotNull  
 @Size(min = 1, max = 255)  
 @Column(name = **"balance"**, nullable = **false**)

[balance controller left.....]

# Vehicle

**Add Vehicle**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/add |
| Request method | POST |
| Required Parameters | sn: a new serial number  type: vehicle type  \* 1 -> electric scooters  \* 2 -> electric bikes |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data - the added vehicle data (if success) |
| Example | http://127.0.0.1/vehicle/add?sn=AABBCC445566&type=1 |

**Find Vehicle(s)**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/find |
| Request method | POST |
| Required Parameters | Empty when find all vehicles  sn: a serial number  type: vehicle type  \* 1 -> electric scooters  \* 2 -> electric bikes |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data - the vehicle(s) data (if success) |
| Example | By sn and type:  http://127.0.0.1/vehicle/find?sn=AABBCC445566&type=1  By sn:  http://127.0.0.1/vehicle/find?sn=AABBCC445566  By type:  http://127.0.0.1/vehicle/find?type=1  Find all:  http://127.0.0.1/vehicle/find |

**Update status**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/status |
| Request method | POST |
| Required Parameters | sn: a serial number  status: a valid status to change to  \* -1 -> under maintenance \* 0 -> standby \* 1 -> in use \* 2 -> parking \* 3 -> reported  \* 4 -> defective |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data - the vehicle updated data (if success) |
| Example | http://127.0.0.1/vehicle/status?sn=AABBCC445566&status=1 |

**Maintain**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/maintain |
| Request method | POST |
| Required Parameters | sn: a serial number  email:  an email address which belongs to an operator (no email will result in getting maintenance records) |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the vehicle updated data (if set success)  - the vehicle maintenance records (if get success) |
| Example | Assign a maintainer  (will also change the status to -1):  http://127.0.0.1/vehicle/maintain?sn=AABBCC445567&email= test@operator.com  Get maintenance records:  http://127.0.0.1/vehicle/maintain?sn=AABBCC445567 |

**Location**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/location |
| Request method | POST |
| Required Parameters | sn: a serial number  location:  latitude,longitude (no location will result in getting location) |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the vehicle updated data (if set success)  - the vehicle latest location (if get success) |
| Example | Set location:  http://127.0.0.1/vehicle/location?sn=AABBCC445567&latitude=55.8731765&longitude=-4.2935585  Get location:  http://127.0.0.1/vehicle/location?sn=AABBCC445567 |

**User**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/user |
| Request method | POST |
| Required Parameters | sn: a serial number  email:  an email address which belongs to a user (no email will result in getting the assigned user)  remove: the remove action switch, set it to 1 will allow to remove a user from the vehicle |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the vehicle updated data (if set success)  - the current assigned user (if get success)  - the vehicle updated data (if remove success) |
| Example | Assign a user:  http://127.0.0.1/vehicle/user?sn=AABBCC445567&email=test@test.com  Get the user:  http://127.0.0.1/vehicle/user?sn=AABBCC445567  Remove the user:  http://127.0.0.1/vehicle/user?sn=AABBCC445567&remove=1 |

**Charge**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /vehicle/charge |
| Request method | POST |
| Required Parameters | sn: a serial number  charge:  a double type number represented the charging percentage (a negative number can consume the battery life – no matter how large or small the number is, the lowest battery level will be 0 and the highest will be 100) |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the vehicle updated data (if set success)  - the battery life of vehicle (if get success) |
| Example | Charge the vehicle:  http://127.0.0.1/vehicle/charge?sn=AABBCC445567&charge=50  Consume the battery:  http://127.0.0.1/vehicle/charge?sn=AABBCC445567&charge=-50  Get the battery life:  http://127.0.0.1/vehicle/charge?sn=AABBCC445567 |

# Ticket

**Add**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /ticket/add |
| Request method | POST |
| Required Parameters | email: a user email  sn: a serial number  content:  a string content which user submitted |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the ticket data |
| Example | Add a ticket:  http://127.0.0.1/ticket/add?email=test@test.com&sn=AABBCC445567&content=I need help! |

**All**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /ticket/all |
| Request method | GET |
| Required Parameters | None |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the tickets data |
| Example | Get all tickets:  http://127.0.0.1/ticket/all |

**User**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /ticket/user |
| Request method | GET |
| Required Parameters | email: a user email |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the tickets data |
| Example | Get all tickets from a user:  http://127.0.0.1/ticket/user?email=test@test.com |

**Vehicle**

|  |  |
| --- | --- |
| Api address | (HTTP domain) /ticket/vehicle |
| Request method | GET |
| Required Parameters | sn: a serial number |
| return | 1. msg – detailed result  2. code – 200 for success; 400 for error  3. data  - the tickets data |
| Example | Get all tickets from a vehicle:  http://127.0.0.1/ticket/vehicle?sn=AABBCC445567 |