# Renter Car Solution design document

## Data Table Design

### user

**Description:** the table save user’s infomation

|  |  |  |  |
| --- | --- | --- | --- |
| name | type | can null? | desc |
| id | int(64) | N | auto increment id |
| username | varchar(32) | N | user’s login account |
| password | varchar(32) | N | user’s login password |
| create\_time | datetime | Y |  |
| update\_time | datetime | Y |  |

### car\_stock\_info

**Description:**the table save the car’s relevant information

|  |  |  |  |
| --- | --- | --- | --- |
| name | type | can null? | desc |
| id | int(64) | N | auto increment id |
| carName | varchar(32) | N | car’s name |
| carType | varchar(4) | N | 1 Toyota Camry 2 BMW 650 |
| carStatus | varchar(4) | N | 1 inStock 2 inRental |
| create\_time | datetime | Y |  |
| update\_time | datetime | Y |  |

### user\_rental\_record

**Description:**the table save the user’s rental record

|  |  |  |  |
| --- | --- | --- | --- |
| name | type | can null? | desc |
| id | int(64) | N | auto increment id |
| record\_id | varchar(64) | N | record’s id |
| user\_id | varchar(64) | N | user’s id |
| car\_id | varchar(32) | N | car’s id |
| rental\_status | varchar(4) | N | 1 in trading 2 rental success 3 rental fail  4 in the back 5 return success 6 return fail |
| create\_time | datetime | Y |  |
| update\_time | datetime | Y |  |

## API SPEC

### 2.1 searchStockInfo

**Dscription:**

Obtain relevant car stock information

**Ul:**

/carRental/ searchStockInfo

**RquestParam:**

Null

**RsponseParam:**

|  |  |  |  |
| --- | --- | --- | --- |
| SerialNum | ParameterName | ParameterType | Dscription |
| 1 | stockInfoList | List<Object> |  |
| 1.1 | carTypeName | String | eg.BMW 650 |
| 1.2 | carType | String | 1 Toyota Camry 2 BMW 650 |
| 1.3 | stockNum | Integer |  |

### 2.2 RentalCar

**Dscription:**

User Try to Rental Car

**Ul:**

/carRental/rentalCar

**RquestParam:**

|  |  |  |  |
| --- | --- | --- | --- |
| SerialNum | ParameterName | ParameterType | Dscription |
| 1 | userId | String |  |
| 2 | carType | String |  |

**RsponseParam:**

|  |  |  |  |
| --- | --- | --- | --- |
| SerialNum | ParameterName | ParameterType | Description |
| 1 | carId | String |  |

### 2.3 ReturnCar

**Dscription:**

User Try to Return Car

**Ul:**

/carRental/returnCar

**RquestParam:**

|  |  |  |  |
| --- | --- | --- | --- |
| SerialNum | ParameterName | ParameterType | Dscription |
| 1 | userId | String |  |
| 2 | carId | String |  |

**RsponseParam:**

null

## Test Demo

There have 3 atomic action in the solution, they are, search car stock info/ rental one car/ return one car

###### Test 1.

step1:search car stock info

result:get the stock of car

###### Test 2

step1:rental one car

result:get the rental car’s id

###### Test 3

step 1:return one car

result:because not rental a car before, so it will fail

###### Test 4

step 1:rental two same car

step 2:rental a car which type is same before

result: when third time to rental car , will remind you to choose other car

###### Test 5

step1:rental a car which car’s type is not exist

result:it will remind you to choose other car

###### Test 6

step 1:rental two same car

step 2:retuan a car

step 3: rental a car which type is same before

result: it can rental success