**User Tracking System**

User Tracking system which in turn provides / covers the following points like concurrent user tracking, different devices. A license module is developed in the name of user tracking system which can be reused as it is written as an API. This module / component covers all the points given in the requirement and below are the endpoints used,

* **Login**
* **Store User Device Information**
* **Dashboard**
* **Users List ( Concurrent Users & Failed Users)**
* **Logout**

**Login**

**URL:** <http://localhost/Q3/licenseapi/license/login>

**Request Type:** GET

**Authorization:** Basic (Useremail & Password)

**Response:**

{

"status":"success",

"key":"eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpYXQiOjE2MTAxMDkyNjQsImV4cCI6MTYxMDEwOTg2NCwianRpIjoiNkNFRjkyOTUtMzIzOS04MTE1LUVBRUUtRTc0RjVFMzQ3MUI3IiwicHJvZmlsZXMiOlt7ImVtYWlsIjoiZGluZXNoa3VtYXIuZGV2YXJhakBrZ2lzbC5jb20iLCJ1c2VyaWQiOiIxIn1dfQ.sRXpfQ3JrlR84M0tqqB75KqfDJ74bm7sMVWbKWlh6qc",

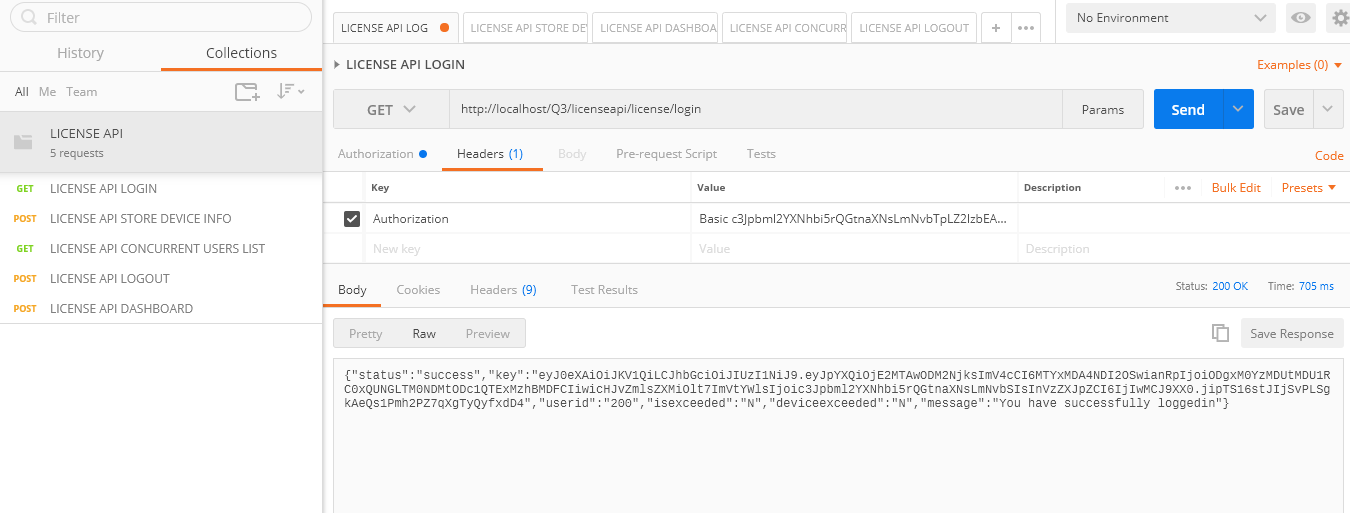
"userid":"1",

"isexceeded":"N",

"deviceexceeded":"N",

"message":"You have successfully loggedin"

}



status - success / failure

key - JWT Token based on the success / failure

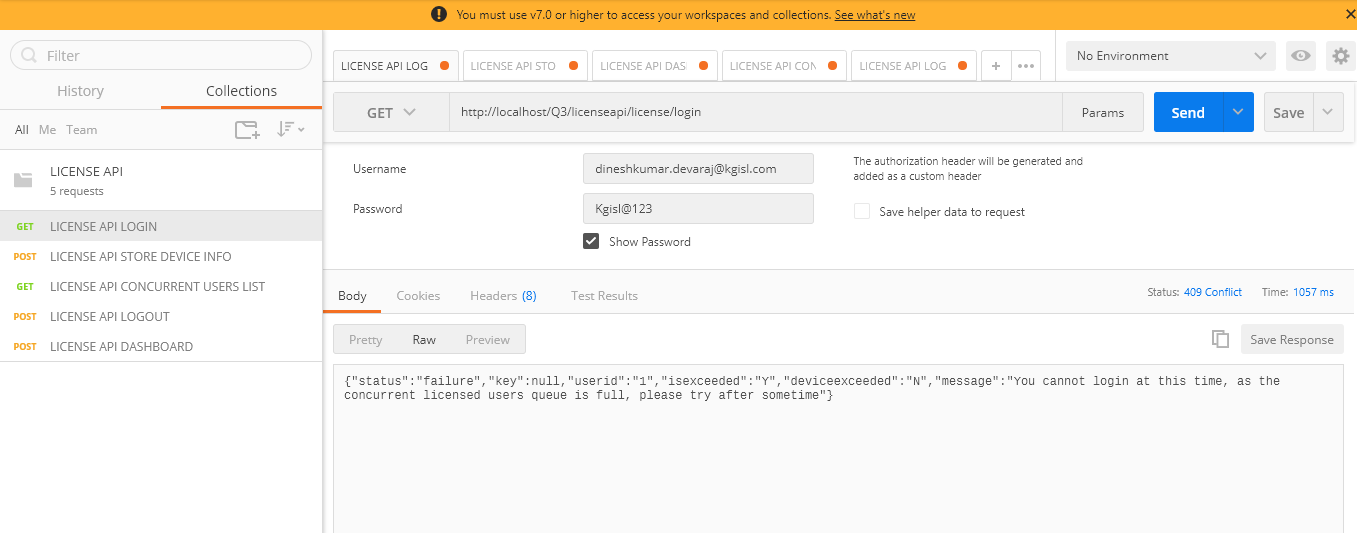
userid - Login userid based on the useremail & password

isexceeded - Concurrent users exceeded flag

deviceexceeded - Allowed number of devices exceeded flag

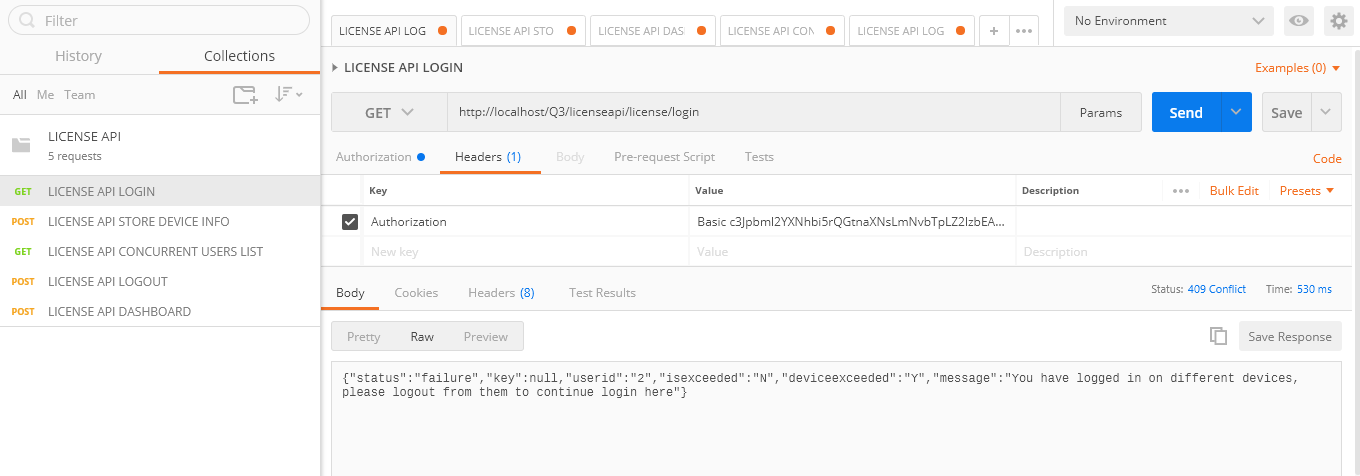
message - Custom message based on the status flag

If more than the specified user is trying to login into the application then the concurrent user validation error message is thrown, it is displayed in the below screenshot,



Message: **You cannot login at this time, as the concurrent licensed users queue is full, please try after sometime**

If the same user tries to login to the system with different devices and if it exceeds the limit then the error message will be thrown and it is given clearly in the below screenshot,



Message:

**You have logged in on different devices, please logout from them to continue login here**

If the password is invalid then the below error message will be thrown,

**Please enter a valid useremail**

If the password is invalid then the below error message will be thrown,

**Please enter a valid password**

**Store User Device Information**

**URL:** <http://localhost/Q3/licenseapi/license/storeUserDeviceInfo>

**Request Type:** POST

**Authorization:** Bearer

**Request:**

{

"userid" : 1,

"sysip" : "10.100.4.242",

"sysbrowser" : "chrome",

"sysos" : "windows",

"devtype" : "desktop",

"flag" : "S",

"isexceeded" : "N",

"deviceexceeded" : "N"

}

**Response:**

{

"status": "S",

"loginid": "19",

"sysip": "10.100.4.242",

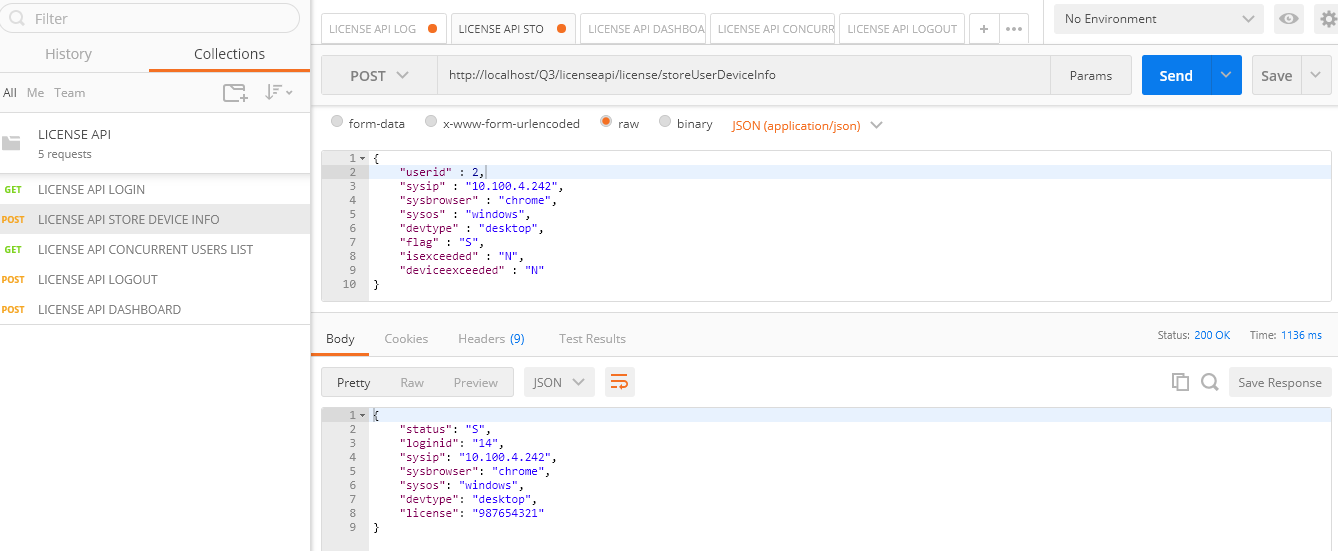
"sysbrowser": "chrome",

"sysos": "windows",

"devtype": "desktop",

"license": "987654321"

}



Above request will be stored in the database while the API endpoint is called and the response will be sent back to the front end application as it will be displayed in the web browser.

status: S / F

loginid: 19 (Related to the log stored for the current session)

sysip : 10.100.4.242 (IP address from where the request is triggered)

sysbrowser: Chrome (System Browser where the request is triggered)

sysos: Windows ( Operating System )

devtype: Desktop / Mobile

license: 987654321 ( license related to the specific user )

**Dashboard**

**URL:** http://localhost/Q3/licenseapi/license/dashboard

**Request Type:** POST

**Authorization:** Bearer

**Request:**

{

"loginid" : 14

}

**Response:**

{

"status": "S",

"loginid": 14,

"sysip": "10.100.4.242",

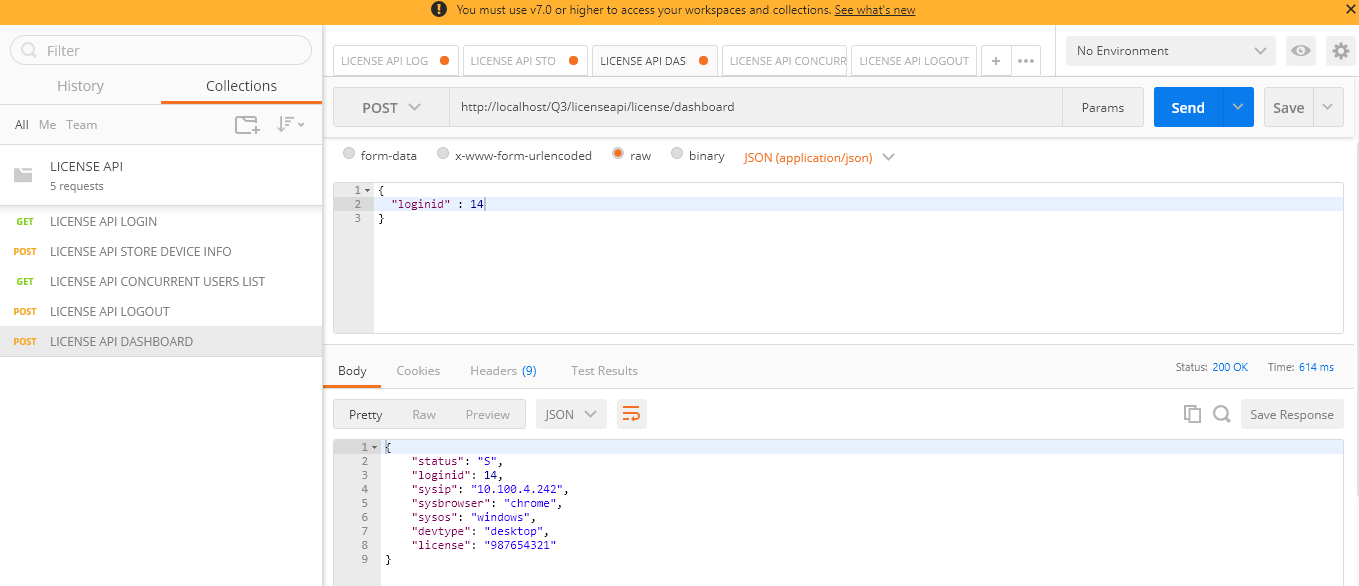
"sysbrowser": "chrome",

"sysos": "windows",

"devtype": "desktop",

"license": "987654321"

}



The response of the Dashboard API is same as the response of the store user device information.

**Concurrent Users List**

**URL:** <http://localhost/Q3/licenseapi/license/trackLoginUsers>

**Request Type:** GET

**Authorization:** Bearer

**Response:**

{

"loginusers": [

{

"User Name": "Srinivasan Kittusamy",

"User Email": "srinivasan.k@kgisl.com",

"LicenseId": "987654321",

"Login DateTime": "01/08/2021 12:46:56",

"IP": "10.100.4.242",

"Browser": "chrome",

"Operating System": "windows",

"Device Type": "desktop",

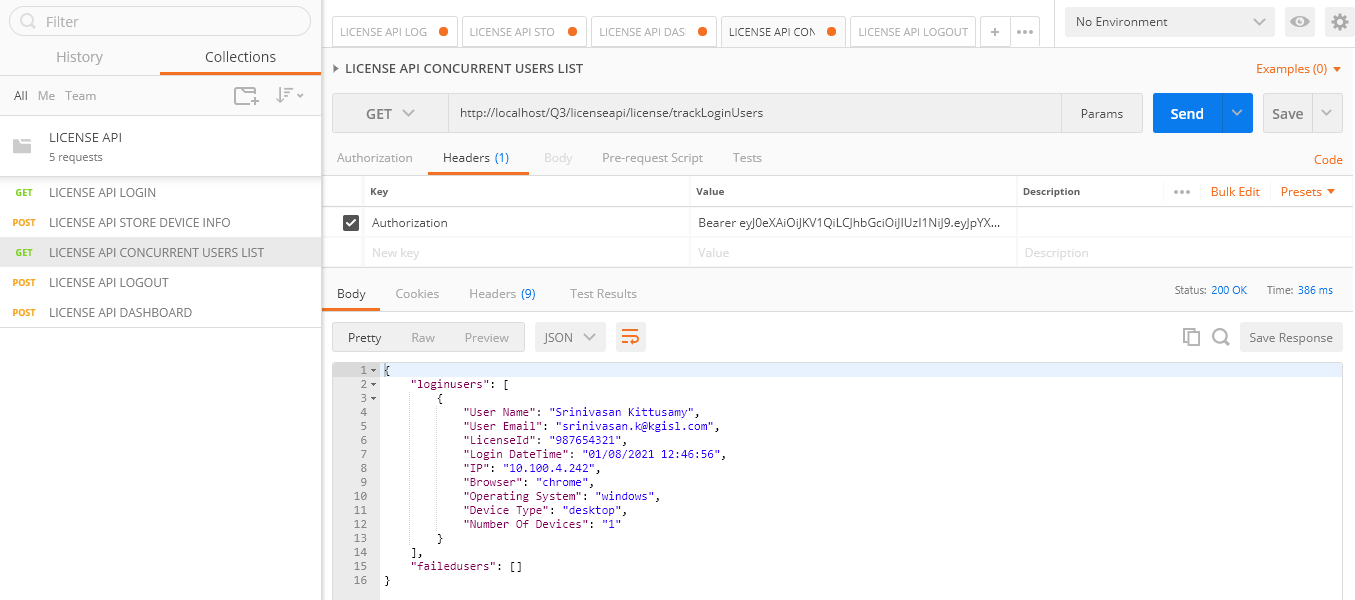
"Number Of Devices": "1"

}

],

"failedusers": []

}



Above are the response which is received while using the concurrent users list.

**Logout**

**URL:** <http://localhost/Q3/licenseapi/license/logout>

**Request Type:** POST

**Authorization:** Bearer

**Request:**

{

"loginid" : 14

}

**Response:**

{

"status": "success",

"message": "Logged Out Successfully"

}

**Unit Testing**

Unit Testing has been covered for the **concurrent users & maximum allowed devices**, please refer the screenshot below,

**Unit Testing Tool:** PHPUnit

