Patient Lab Results

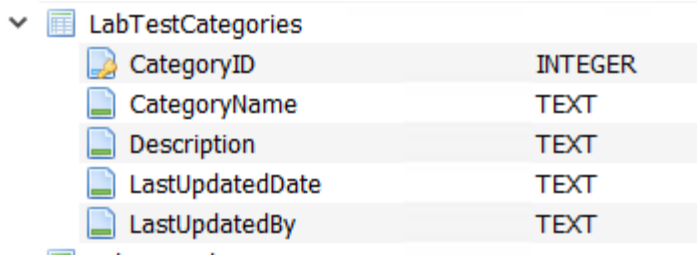
Swagger Url

https://patientlabtestapi.azurewebsites.net/swagger/index.html

Introduction

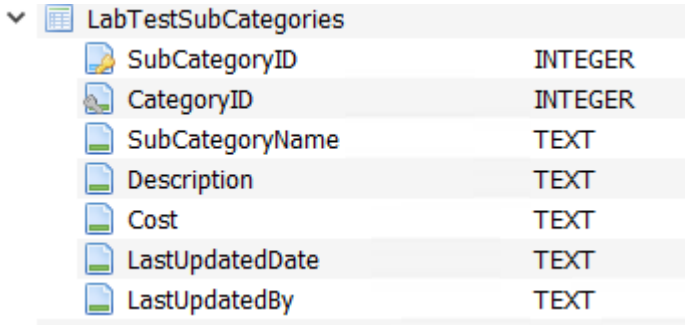
This document mentions about the different components of the Patient lab results webapi built on top of DotNet Core and SQLite database. Basically, the api helps to perform the crud operations on the required functionalities listed in this document. The requirement is to capture Patient information and Lab results/tests per patient. As the lab result/test is based on a certain type of lab test, we are categorizing that into the below groups. Each lab test will be associated with a category and sub category.

- Categories : The different Categories are General Health, Women's Health, Men's Health etc.



- SubCategories : For each Category, there can be many Sub categories. For example, the category General Health can have the following sub categories

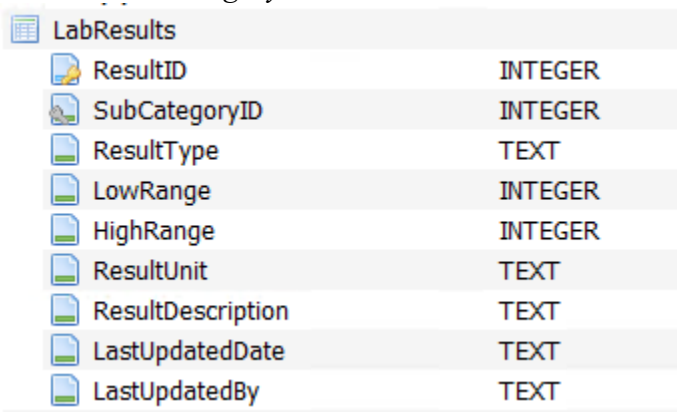
    - Basic Health Profile
    - Cholestrol Panel
    - Complete Blood Count



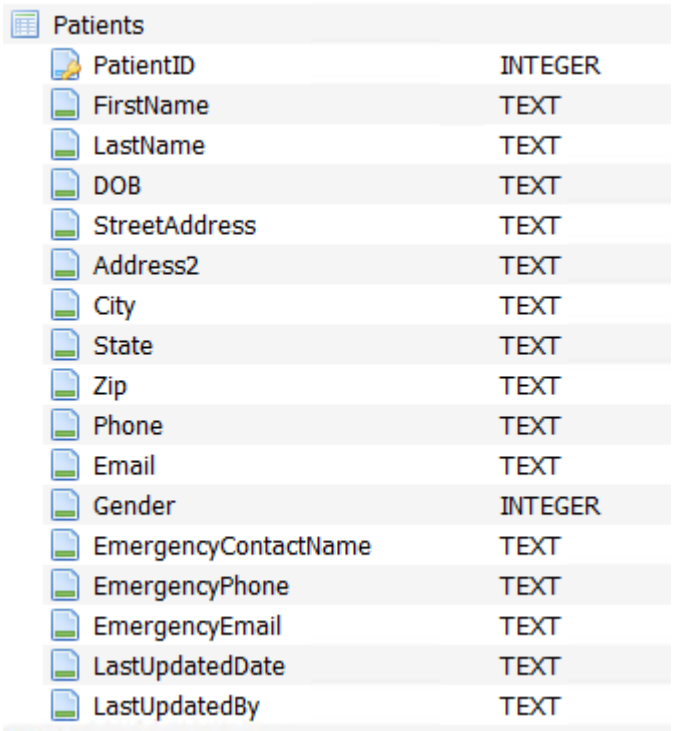
- LabResult/Test : This is a look up functionality which will have the name of the test, low and high range, unit.. based on the Sub Category and Category.

For example

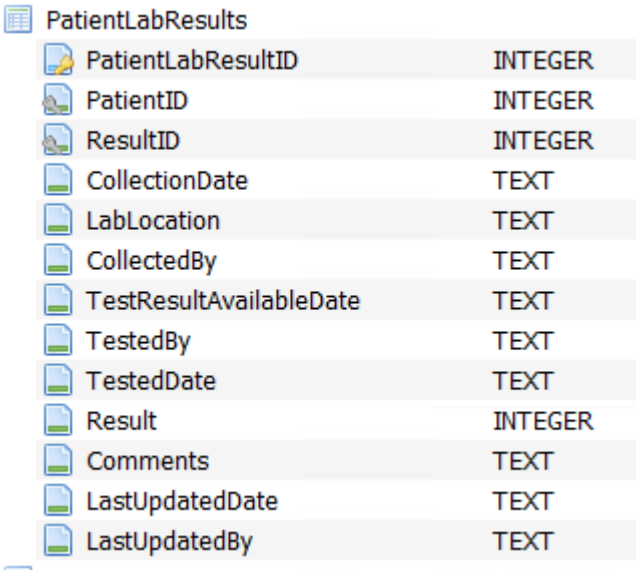
"HDL Cholestrol" is an example of LabResult and it comes under the main Category "General Health" and SubCategory "Cholestrol Panel"



- Patient : This is the patient entity class that holds the patient information



- PatientLabResults : This entity holds the details of Patient and LabResults/tests combined. For each patient, there can be one or more results in this table.



The below is an example of different Categories, SubCategories and LabResults or tests.

Category	**Sub Category**	
General Health	Cholestrol Panel	**LabResult** HDL Cholestrol LDL Cholestrol Triglycerides
Women's Health		
Men's Health		
Digestive Health		
Infectious Disease		

Authentication and Authorization

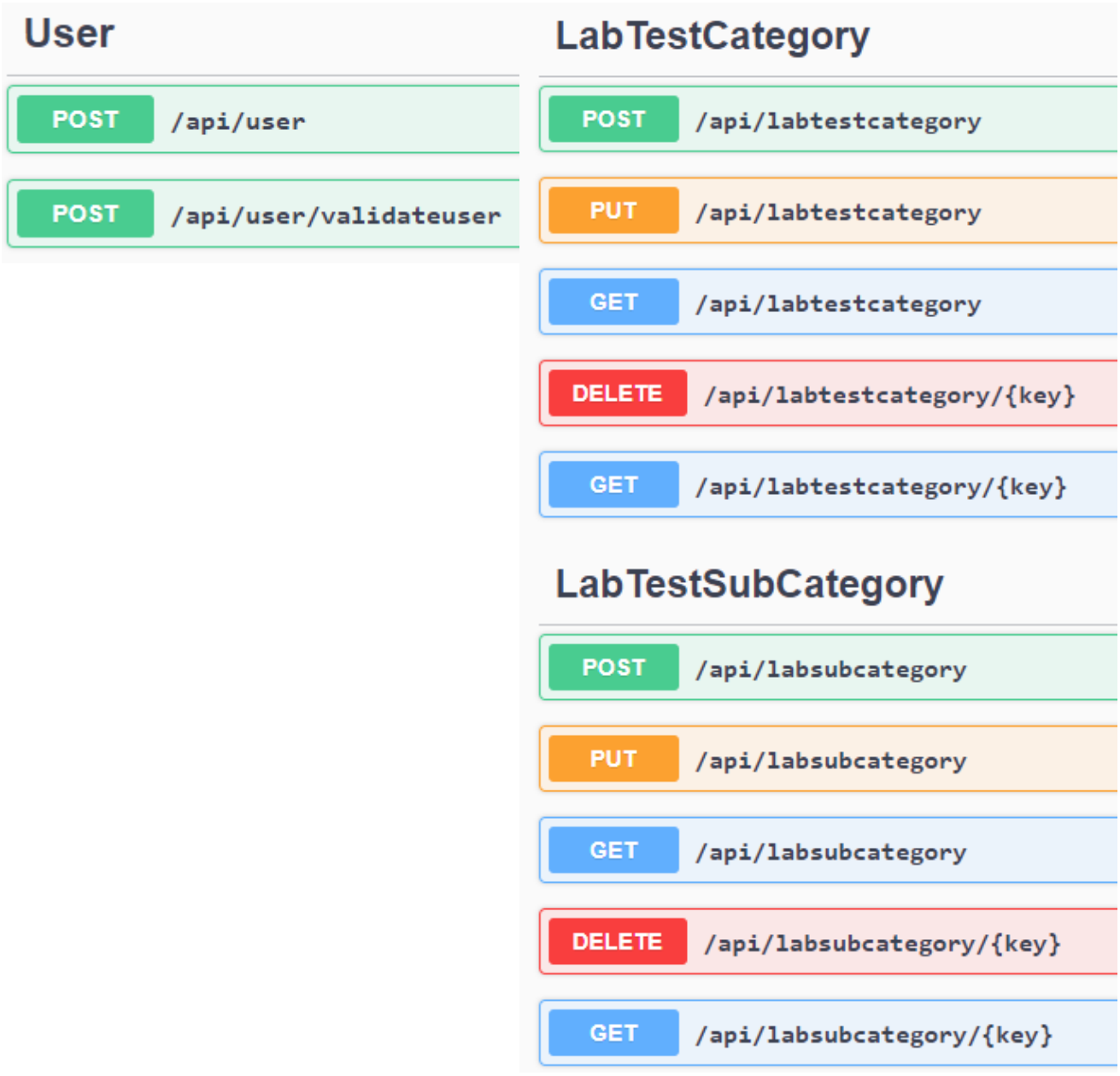
The API's are authorized and requires token to access it. For generating the token, the user need to invoke

https://patientlabtestapi.azurewebsites.net/api/user/validateuser sending the username/pwd

If the user is not registered, then the below API can be invoked.

https://patientlabtestapi.azurewebsites.net/api/user

API List

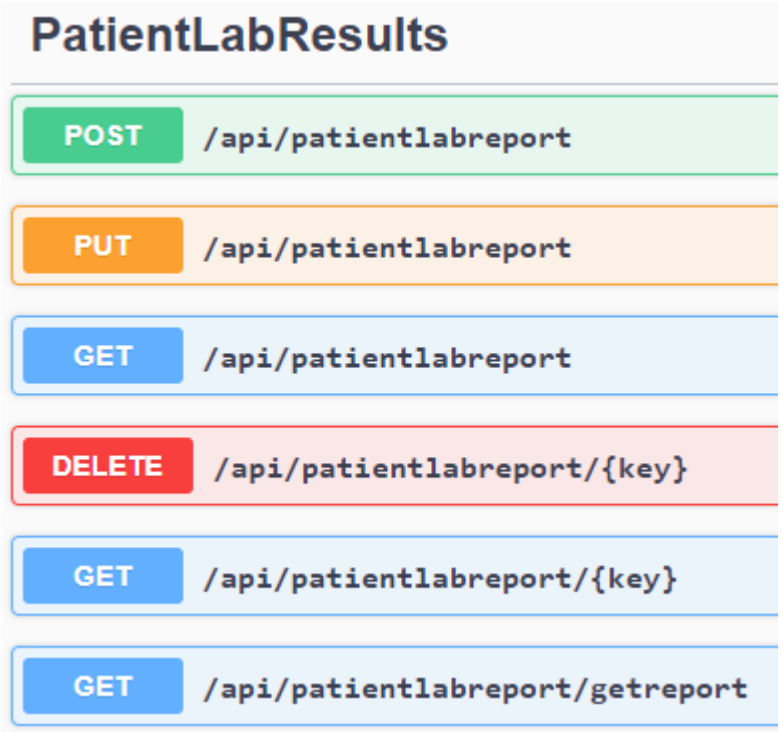


LabResult

POST	/api/labresult
PUT	/api/labresult
GET	/api/labresult
DELETE	/api/labresult/{key}
GET	/api/labresult/{key}

Patient

POST	/api/patient
PUT	/api/patient
GET	/api/patient
DELETE	/api/patient/{key}
GET	/api/patient/{key}



Patient and Lab Report Stories

Inorder to create a new Lab report, we need to add few information regarding the Categories, Sub Categories and LabResult/tests. The below are the API's to create those.

All the below APIs requires token generated from the below API
https://patientlabtestapi.azurewebsites.net/api/user/validateuser sending the username/pwd

Category : https://patientlabtestapi.azurewebsites.net/api/labtestcategory
Type : HttpPost
Header : Authorization requires token from the User API

Input request

```
{
  "categoryName": "General Health",
  "description": "Take a deep dive into your health with a Comprehensive Health Profile"
}
```

Output Response


```
  "categoryID": 5,
  "categoryName": "General Health",
  "description": "Take a deep dive into your health with a Comprehensive Health Profile",
  "lastUpdatedDate": "2021-10-21T20:41:45.4494573+00:00",
  "lastUpdatedBy": "testuser1",
  "message": {
    "messageDescription": "Record has been created.",
    "messageCode": "100"
  }
```

```
}
```


SubCategory : https://patientlabtestapi.azurewebsites.net/api/labsubcategory
Type : HttpPost
Header : Authorization requires token from the User API

Input Request

{
"categoryID": 5,
"subCategoryName": "Cholestrol Panel",
"description": "Test to evaluate the health of your health and arteries",
"cost": 60
}

Output Response


```
  "subCategoryID": 3,
  "categoryID": 5,
  "subCategoryName": "Cholestrol Panel",
  "description": "Test to evaluate the health of your health and arteries",
  "cost": 60,
  "lastUpdatedDate": "2021-10-21T20:45:25.2728951+00:00",
  "lastUpdatedBy": "testuser1",
  "labTestCategory": null,
  "message": {
    "messageDescription": "Record has been created.",
    "messageCode": "100"
  }
}
```


LabResult: https://patientlabtestapi.azurewebsites.net/api/labresult
Type : HttpPost
Header : Authorization requires token from the User API

Input Request

{
"subCategoryID": 3,
"resultType": "HDL Cholestrol",
"lowRange": 100,
"highRange": 129,
"resultUnit": "mg/dL",
"resultDescription": "LDL (low-density lipoprotein), also called “bad” cholesterol, makes up most of your body's cholesterol. High levels of LDL cholesterol raise your risk for heart disease and stroke."
}

Output Response


```
  "resultID": 2,
  "subCategoryID": 3,
  "resultType": "HDL Cholestrol",
  "lowRange": 100,
  "highRange": 129,
  "resultUnit": "mg/dL",
```

```
  "resultDescription": "LDL (low-density lipoprotein), also called “bad” cholesterol, makes up most of your body's cholesterol. High levels of LDL cholesterol raise your risk for heart disease and stroke.",
  "lastUpdatedDate": "2021-10-21T20:50:28.3967622+00:00",
  "lastUpdatedBy": "testuser1",
  "labTestSubCategory": null,
  "message": {
    "messageDescription": "Record has been created.",
    "messageCode": "100"
  }
}
```


Patient: https://patientlabtestapi.azurewebsites.net/api/labresult
Type : HttpPost
Header : Authorization requires token from the User API

Input Request


```
{
 "firstName": "Maria",
 "lastName": "Jack",
 "dob": "2001-10-21T20:52:21.320Z",
 "streetAddress": "3555 AAA Cir",
 "address2": "Apt C",
 "city": "Montgomery",
 "state": "AL",
 "zip": "36116",
 "phone": "1111111111",
 "email": "mariajack@aaaaaaaa.com",
 "gender": 1,
 "emergencyContactName": "Jack Alex",
 "emergencyPhone": "2222222222",
 "emergencyEmail": "jalex@aaaaaaa.com"
}
```


Output Response


```
  "patientID": 1,
  "firstName": "Maria",
  "lastName": "Jack",
  "dob": "2001-10-21T20:52:21.32Z",
  "streetAddress": "3555 AAA Cir",
  "address2": "Apt C",
  "city": "Montgomery",
  "state": "AL",
  "zip": "36116",
  "phone": "1111111111",
  "email": "mariajack@aaaaaaaa.com",
  "gender": 1,
  "emergencyContactName": "Jack Alex",
  "emergencyPhone": "2222222222",
  "emergencyEmail": "jalex@aaaaaaa.com",
  "lastUpdatedDate": "2021-10-21T20:54:37.1675152+00:00",
  "lastUpdatedBy": "testuser1",
```

```
  "message": {
    "messageDescription": "Record has been created.",
    "messageCode": "100"
  }
}
```


Patient: https://patientlabtestapi.azurewebsites.net/api/patientlabreport
Type : HttpPost
Header : Authorization requires token from the User API

Input Request


```
{
 "patientID": 1,
 "resultID": 1,
 "collectionDate": "2021-10-07T20:56:18.181Z",
 "labLocation": "Montgomery",
 "collectedBy": "Jack Daniel",
 "testResultAvailableDate": "2021-10-21T20:56:18.181Z",
 "testedBy": "Jack",
 "testedDate": "2021-10-21T20:56:18.181Z",
 "result": 110,
 "comments": "Test has been completed and the LDL Cholestrol is in the normal range"
}
```


Output Response


```
  "patientLabResultID": 1,
  "patientID": 1,
  "resultID": 1,
  "collectionDate": "2021-10-07T20:56:18.181Z",
  "labLocation": "Montgomery",
  "collectedBy": "Jack Daniel",
  "testResultAvailableDate": "2021-10-21T20:56:18.181Z",
  "testedBy": "Jack",
  "testedDate": "2021-10-21T20:56:18.181Z",
  "result": 110,
  "comments": "Test has been completed and the LDL Cholestrol is in the normal range",
  "lastUpdatedDate": "2021-10-21T20:57:49.4260767+00:00",
  "lastUpdatedBy": "testuser1",
  "patient": null,
  "labResult": null,
  "message": {
    "messageDescription": "Record has been created.",
    "messageCode": "100"
  }
}
```

Testing from Postman

New User : We can create new user by calling the below API4

https://patientlabtestapi.azurewebsites.net/api/user

Input Request

```
{
  "userName": "username",
  "password": "password",
  "role": "Admin"
}
```

Output Response

```
  "messageDescription": "User has been created.",
  "messageCode": "750"
}
```

Generating the token

We need to generate the token by calling the below API

https://patientlabtestapi.azurewebsites.net/api/user/validateuser
Type : HttpPost

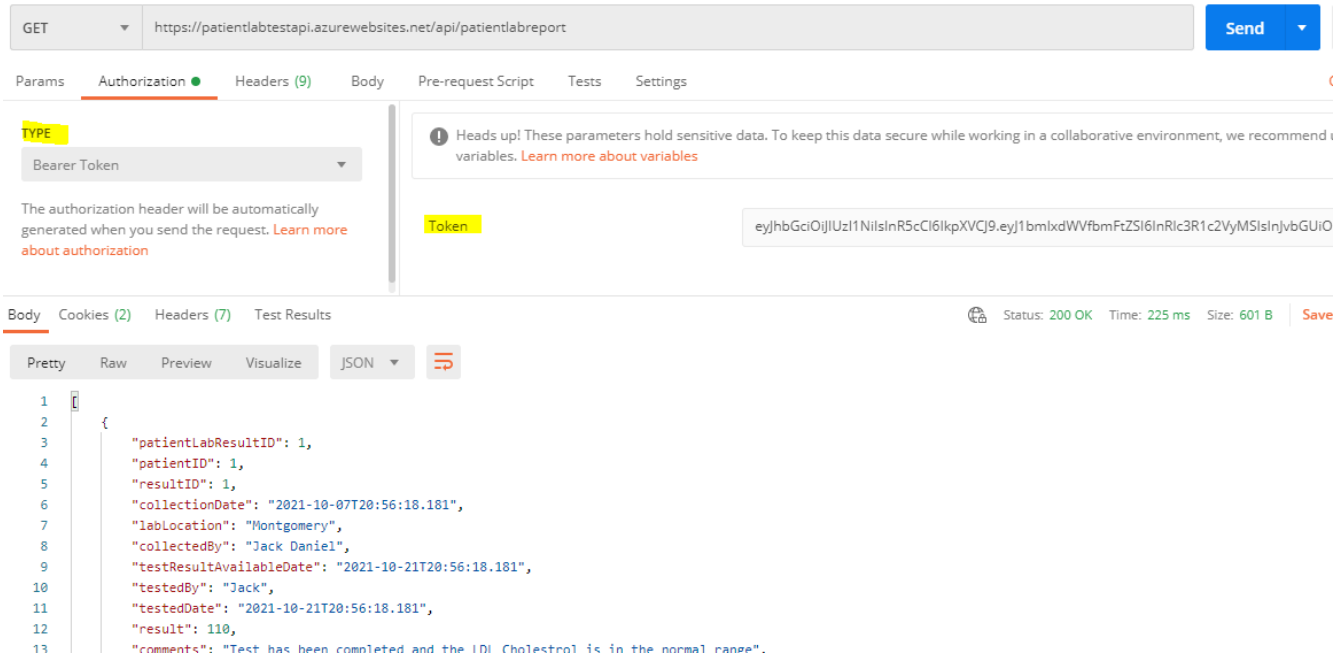
Input Request

```
{
  "userName": "username",
  "password": "password
}
```

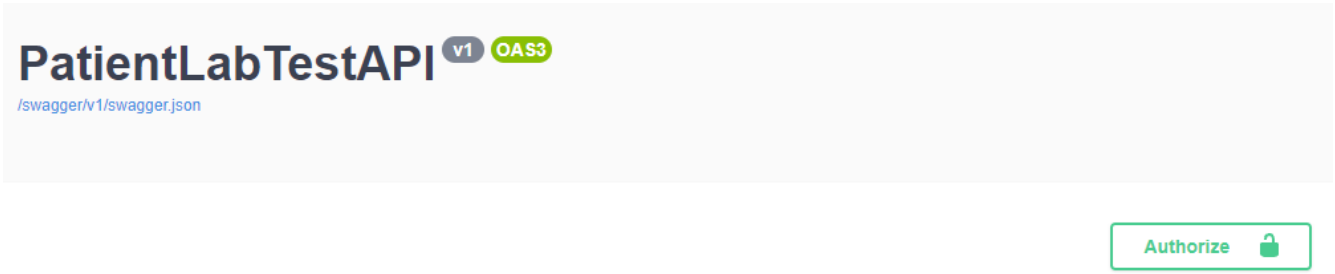
Output Response

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bmlxdWVfbmFtZSI6InRlc3R1c2VyMSIsInJvbGUiOiJBZG1pbiIsIm5iZiI6MTYzNDg0ODg3MSwiZXhwIjoxNjM0ODUyNDcxLCJpYXQiOjE2MzQ4NDg4NzF9.YhX55HCUZWWzF1ZxvCLnapivXEu6t2Cp2c-UDZnYwa0

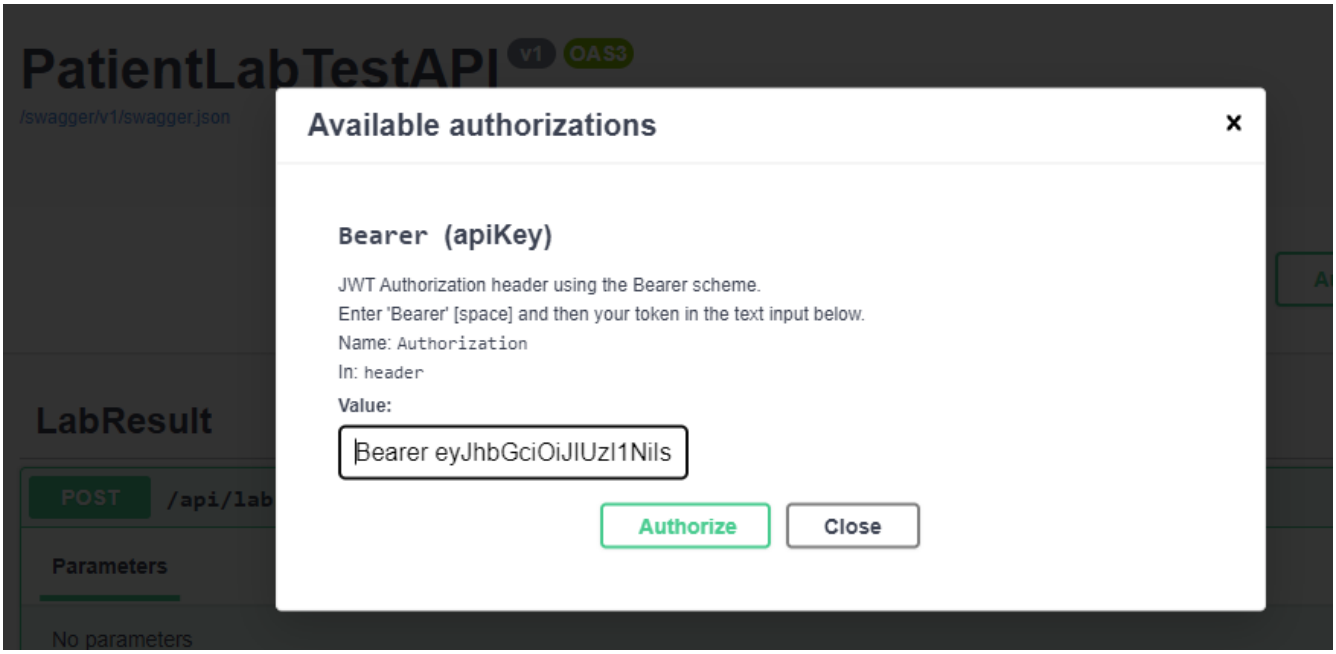
If using postman, we need to add the Authorization token.



If using Swagger, we need to copy the token, the go to top right, and click the Authorize button.



Then paste the token by adding the prefix “Bearer “.



Click “Authorize” button and now on wards we can test any API from the Swagger UI.