

To Do Application –

Assumptions -:

- User has one todo list.
- He would add, delete, read from that list only.
- Updating an item in the list means that it has been completed ie its state has been changed.
- We have 3 levels of priority.
- 0 being the lowest and 2 being the highest.
- Date filed is the date by which the task is to be completed i.e. deadline of the task.
- Priority of task is defined by the user. Range of priority is 0 to 2. 0 being the lowest and 2 being the highest.

My Approach -:

- I have created the application with the assumption that only one list would be there and all the operations would be carried on that list only.
- I have created a database table in PostgreSQL.
- Database has one table todo. It contains fields like Id, title, priority, date and state.
- The Database is connected with our application and all the operations like reading, creating, updating, deleting and searching would then be carried on using API.

Database Schema -:

Database contains one table names as todo. It has fields like Id, title, priority, date and state.

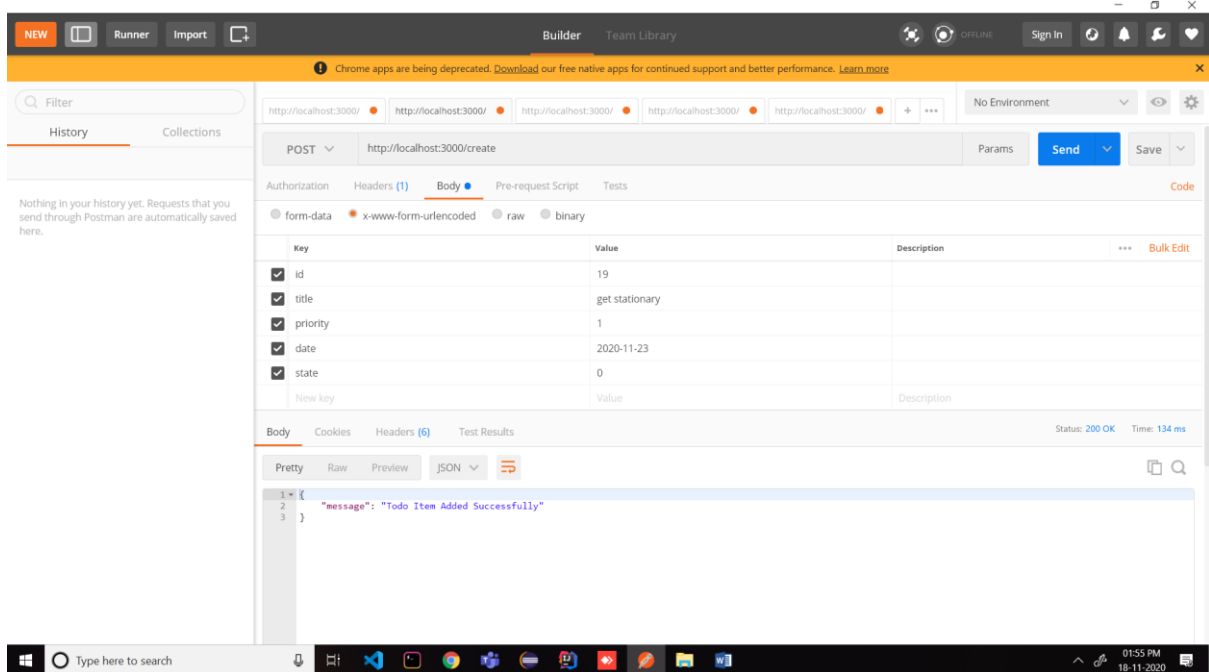
- Id – Id contains unique id of the item that is added in the todo list.
- Title – Title contains the title of the task that is to be done.
- Priority – Priority contains priority of that task. Range of values in priority are (0,1,2) where 0 being the lowest and 2 being the highest.
- Date – Date field contains date of the task it is to be completed before.
- State – State contains whether the task is completed or not. 0 means not completed and 1 means completed.

Steps to run the application -:

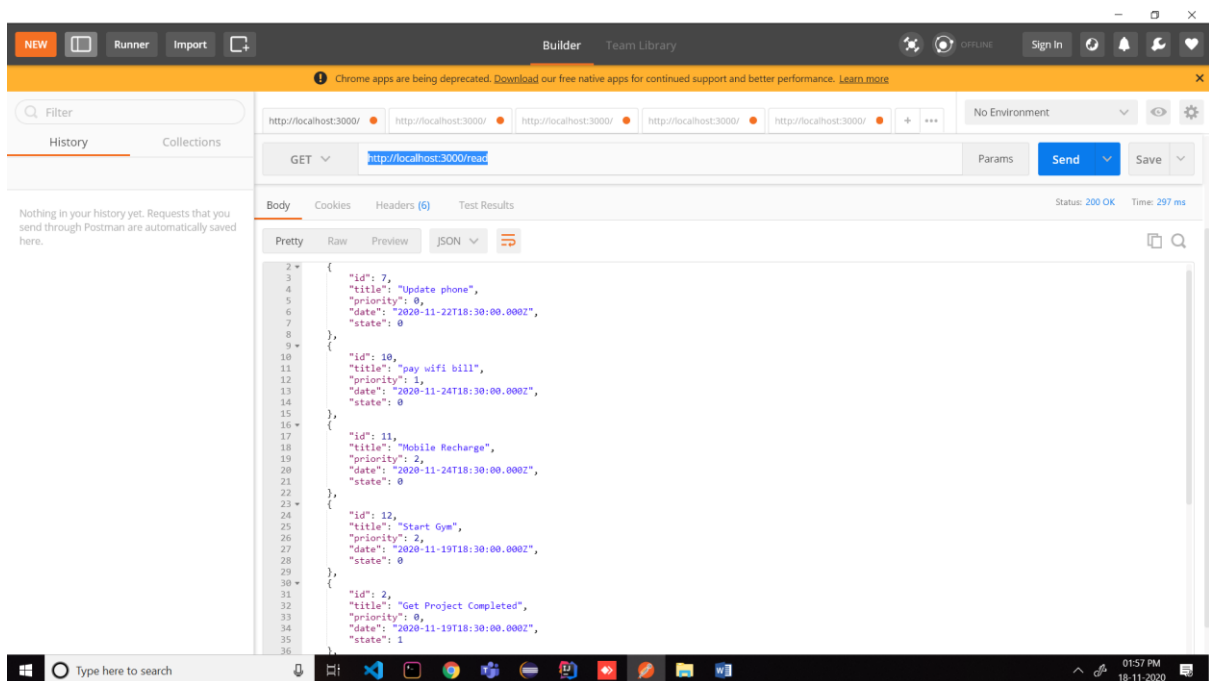
- You can use postman or any simple browser to test the application.
- Download the project files.
- Run “NPM INSTALL” to automatically install the dependencies.
- Download the Database and import the database in your system with postgres.

Proof -:

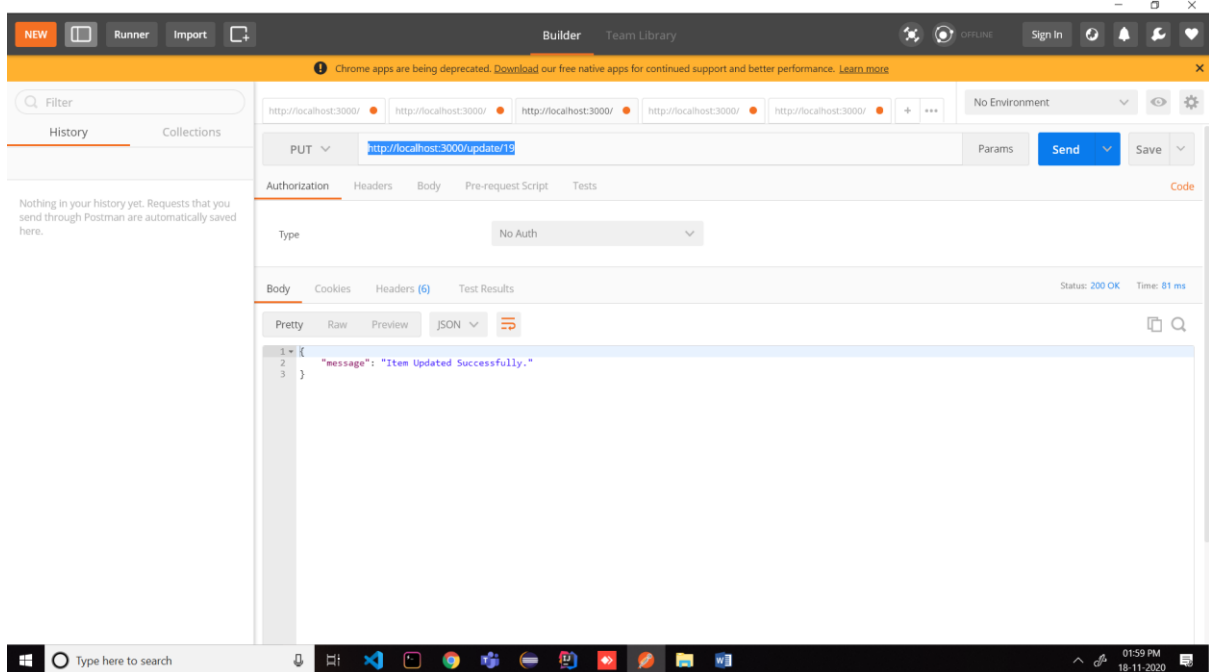
Create a Item using “<http://localhost:3000/create>” route and add the body in the request body.
Eg in the screenshot.



Read the contents of list using <http://localhost:3000/read>.

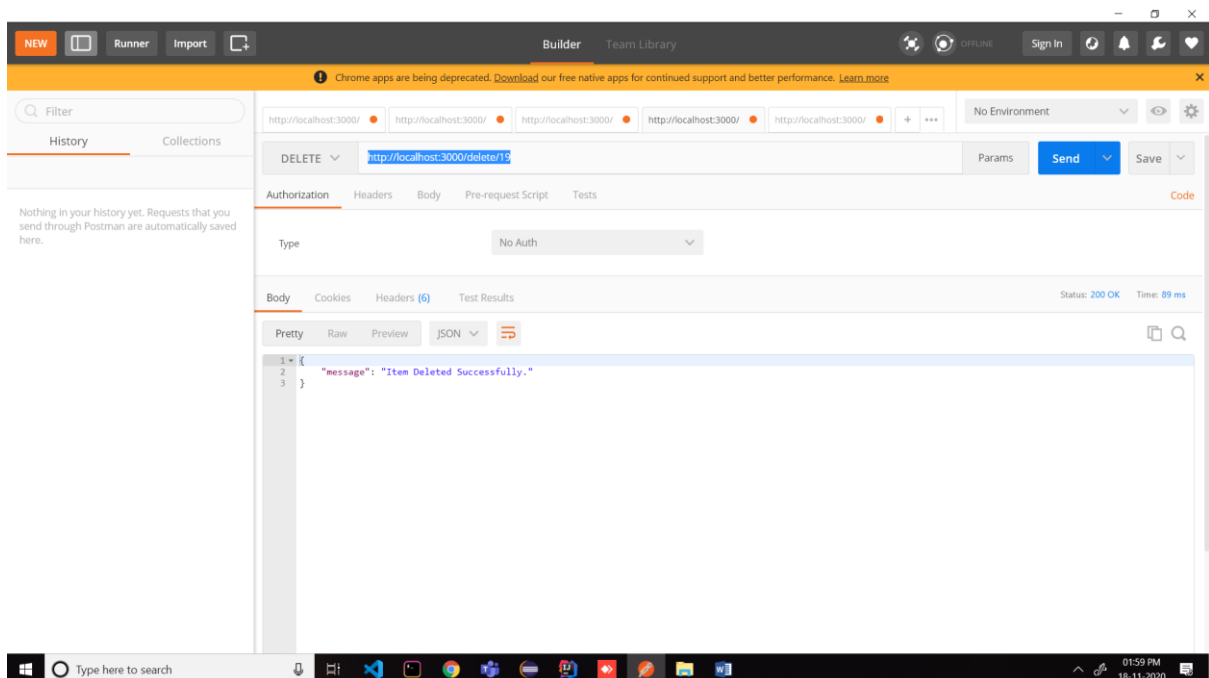


Update the state of any task by providing the id of the task along the api. Eg. <http://localhost:3000/update/19>. This would update the state of task 19 to completed.



As you have completed task 19, you then need to delete it. You can do that using delete route.

<http://localhost:3000/delete/19>. This would delete task 19 from the list.



If you wish to search for a particular task using any parameters, you can do that using search route.

"<http://localhost:3000/search?priority=2>". This would give result for all the task that had priority of 2. In the same way you can search of any specific title, date, priority and state.

The screenshot shows the VS Code editor with a REST client file named `restClient.http`. The request is a GET call to `http://localhost:3000/search?priority=2`. The response is a JSON array of two objects, each representing a task with fields for `id`, `title`, `priority`, `date`, and `state`.

```
1 GET http://localhost:3000/search?priority=2
2
3
4 {
5   "id": 11,
6   "title": "Mobile Recharge",
7   "priority": 2,
8   "date": "2020-11-24T18:30:00.000Z",
9   "state": 0
10 },
11 {
12   "id": 12,
13   "title": "Start Gym",
14   "priority": 2,
15   "date": "2020-11-19T18:30:00.000Z",
16   "state": 0
17 }
```