

# **JOBSHEET PRAKTIKUM WEB LANJUTAN**

Implementasi Restful API  
Mata Kuliah Pemrograman Web Lanjut



**Oleh:**

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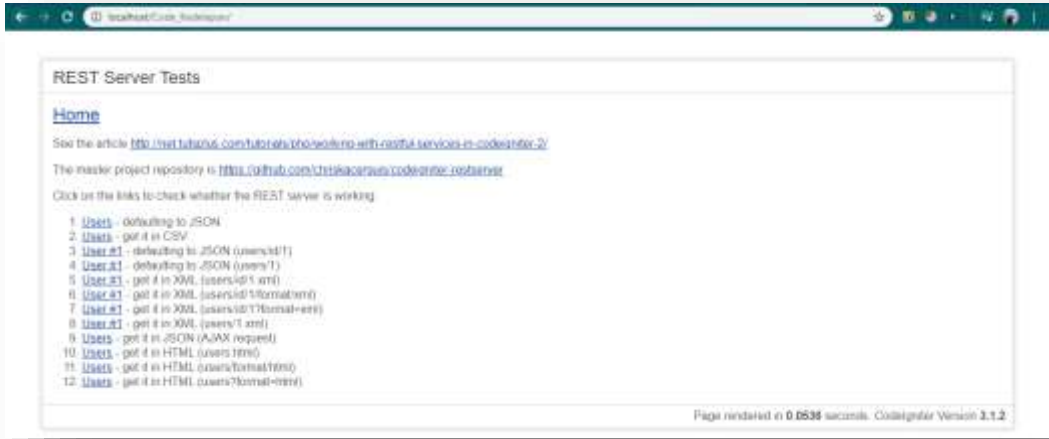
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**Jurusan Teknologi Informasi**

**Politeknik Negeri Malang**

**2019**

## Praktikum – Bagian 1: Instalasi library restful codeigniter

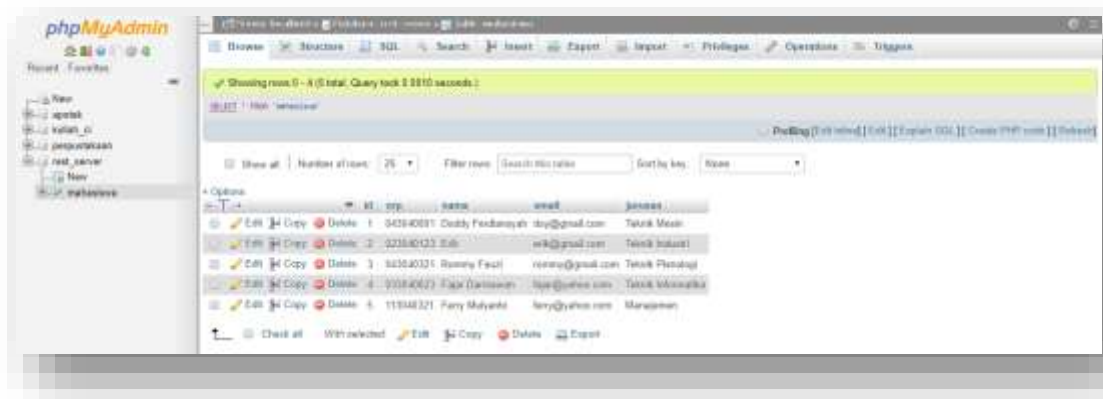
| Langkah | Keterangan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | <p>Extract codeigniter yang sudah di unduh dan letakkan pada folder httdocs. Beri nama Code-kedelapan dan coba akses di <a href="http://localhost/Code_Kedelapan/">http://localhost/Code_Kedelapan/</a>.<br/>Jawaban :</p>                                                                                                                                                                                                                                                                                                                                       |
| 2.      | <p>Selanjutnya lakukan konfigurasi dasar pada config.php</p> <pre> 26  \$config['base_url'] = 'http://localhost/rest_server'; 27 28  /* 29   ----- 30    Index File 31   ----- 32    33    Typically this will be your index.php file, unless you've 34    renamed it to 35    something else. If you are using mod_rewrite to remove 36    the page set this 37    variable so that it is blank. 38  */ 39  \$config['index_page'] = ''; 40  /* 41   ----- </pre> <p>Dan file autoload.php</p> <pre> 61  \$autoload['libraries'] = array('database'); 62 92  \$autoload['helper'] = array('url'); </pre> <p>Dan database.php seperti berikut:</p> |

```

76 ▼ $db['default'] = array(
77     'dsn' => '',
78     'hostname' => 'localhost',
79     'username' => 'root',
80     'password' => 'mysql',
81     'database' => 'rest_server',
82     'dbdriver' => 'mysqli',
83     'dbprefix' => '',
84     'pconnect' => FALSE,
85     'db_debug' => (ENVIRONMENT !== 'production'),
86     'cache_on' => FALSE,
87     'cachedir' => '',
88     'char_set' => 'utf8',
89     'dbcollat' => 'utf8_general_ci',
90     'swap_pre' => '',
91     'encrypt' => FALSE,
92     'compress' => FALSE,
93     'stricton' => FALSE,
94     'failover' => array(),
95     'save_queries' => TRUE
96 );

```

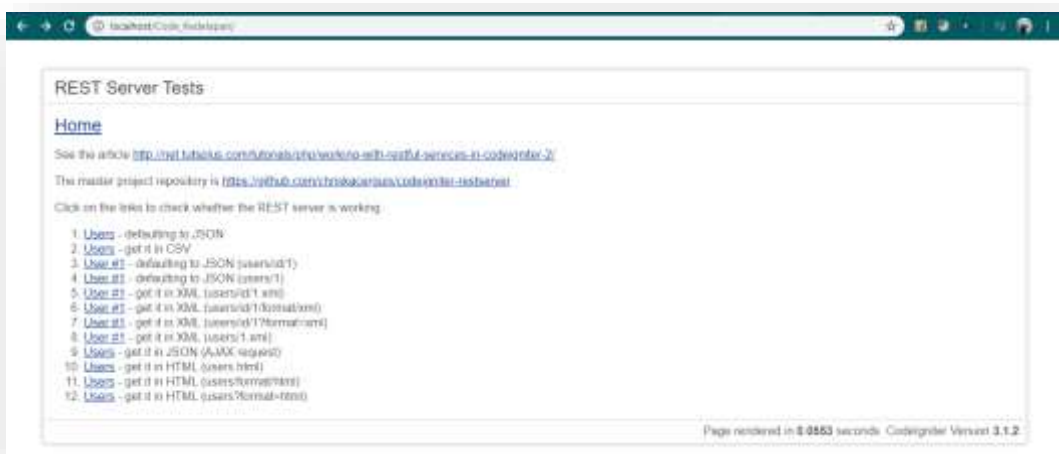
3. Selanjutnya buatlah database rest\_server pada phpmyadmin dan masukkan data dummy. Untuk data dummy dapat dibuat sebagai berikut:



The screenshot shows the phpMyAdmin interface with a table named 'users' selected. The table has 5 rows of data. The columns are 'id', 'username', 'password', 'email', and 'nama'. The data is as follows:

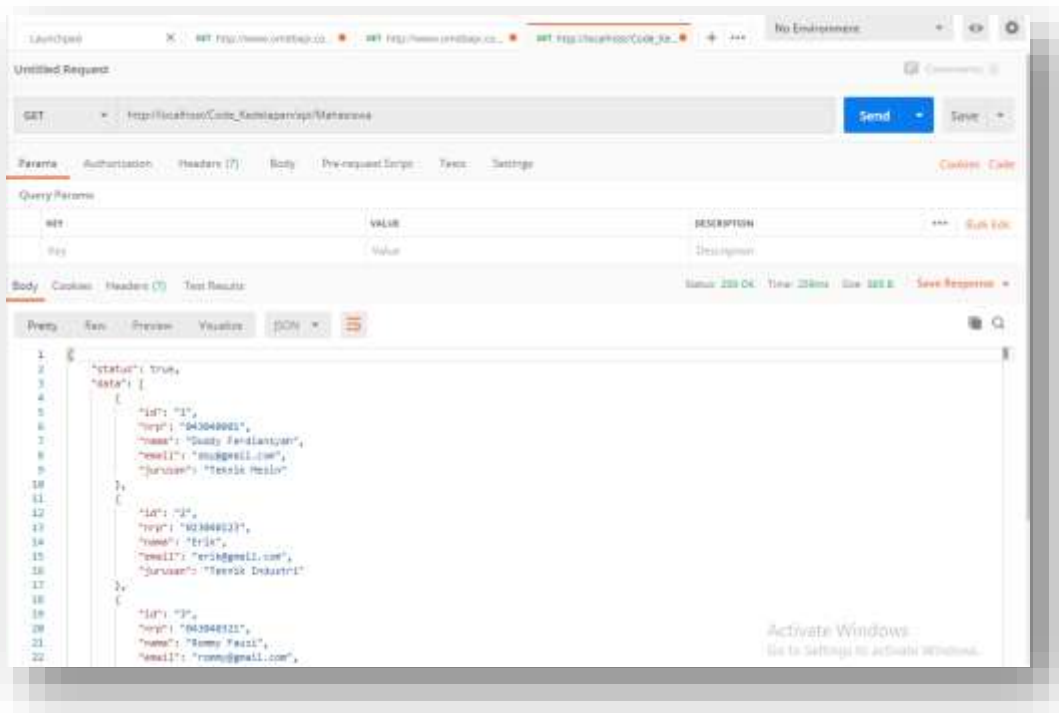
| id | username  | password        | email           | nama               |
|----|-----------|-----------------|-----------------|--------------------|
| 1  | 04394081  | Deddy Pindanyan | deddy@gmail.com | Teknik Mesin       |
| 2  | 023840123 | Edo             | edo@gmail.com   | Teknik Industri    |
| 3  | 883840315 | Romy Fauzi      | romy@gmail.com  | Teknik Pemodelan   |
| 4  | 933840673 | Fajar Darmawan  | fajar@gmail.com | Teknik Informatika |
| 5  | 11348321  | Perry Mulyanti  | perry@yahoo.com | Manajemen          |

4. Selanjutnya buka project [http://localhost/Code\\_Kedelapan/](http://localhost/Code_Kedelapan/). Jika berhasil, tampilan akan berubah menjadi seperti ini:

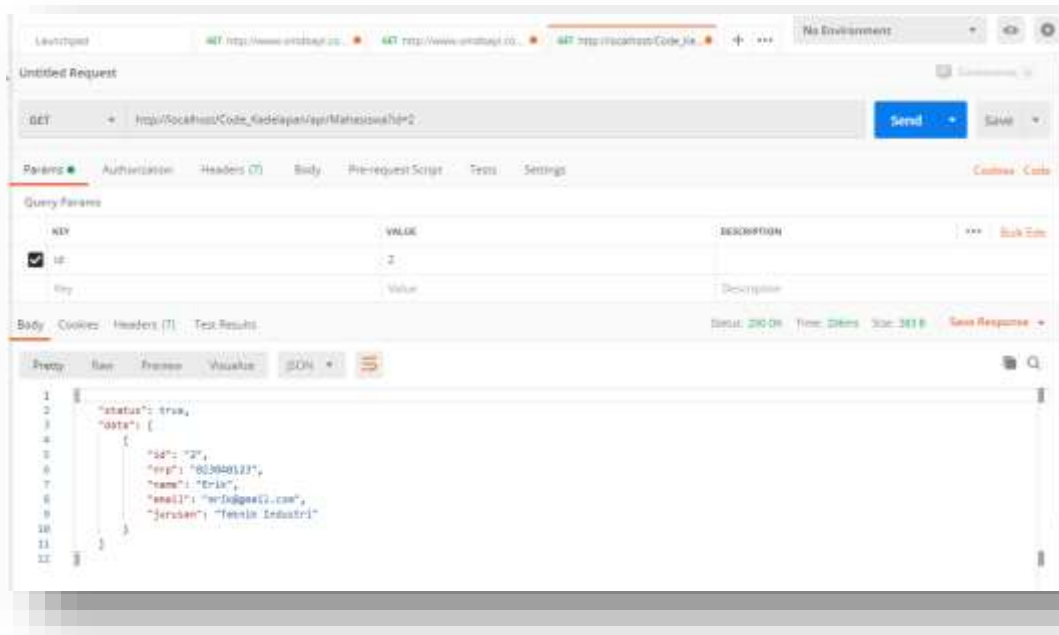


## Praktikum – Bagian 2: Membuat Aplikasi CRUD Restful Codeigniter

| Langkah | Keterangan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | <p>Buatlah file Mahasiswa.php pada controller/api.</p>  <pre> 1 &lt;?php 2 3 defined('BASEPATH') OR exit('No direct script access allowed'); 4 5 require APPPATH . '/libraries/REST_Controller.php'; 6 require APPPATH . '/libraries/Format.php'; 7 use Restserver\Libraries\REST_Controller; 8 9 class Mahasiswa extends REST_Controller { 10 11     function __construct(\$config = 'rest') { 12         parent::__construct(\$config); 13         \$this-&gt;load-&gt;model('Mahasiswa_model', 'mahasiswa'); 14     } 15 16     function index_get() { 17         \$id = \$this-&gt;get('id'); 18         if (\$id === null) { 19             \$mahasiswa = \$this-&gt;mahasiswa-&gt;getMahasiswa(); 20         } else { 21             \$this-&gt;db-&gt;where('id', \$id); 22             \$mahasiswa = \$this-&gt;mahasiswa-&gt;getMahasiswa(\$id); 23         } 24 25         if (\$mahasiswa) { 26             \$this-&gt;response([ 27                 'status' =&gt; true, 28                 'data' =&gt; \$mahasiswa 29             ], REST_Controller::HTTP_OK); 30         } else { 31             \$this-&gt;response([ 32                 'status' =&gt; true, 33                 'data' =&gt; 'id not found' 34             ], REST_Controller::HTTP_NOT_FOUND); 35         } 36     } 37 } </pre> |
| 2.      | <p>Selanjutnya Buatlah file Mahasiswa_model.php pada model.</p>  <pre> 1 &lt;?php 2 3 defined('BASEPATH') OR exit('No direct script access allowed'); 4 5 class Mahasiswa_model extends CI_Model { 6 7     public function getMahasiswa(\$id=null){ 8         if (\$id === null) { 9             return \$this-&gt;db-&gt;get('mahasiswa')-&gt;result_array(); 10         } else { 11             return \$this-&gt;db-&gt;get_where('mahasiswa', ['id' =&gt; \$id])-&gt;result_array(); 12         } 13     } 14 15 } 16 17 /* End of file Mahasiswa_model.php */ 18 19 ?&gt; </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3.      | <p>Buka aplikasi postman, masukkan alamat <a href="http://localhost/Code_Kedelapan/api/mahasiswa">http://localhost/Code_Kedelapan/api/mahasiswa</a> dengan metode GET. dan jika berhasil maka tampilannya akan seperti ini:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



Kita juga dapat melakukan pencarian berdasarkan id, hasilnya akan seperti ini:



4. Untuk fungsi lain Create, Update dan Delete. Lanjutkan kode berikut pada file mahasiswa.php:

```

38 // Delete
39 function index_delete() {
40     $id = $this->delete('id');
41     if ($id === null) {
42         $this->response([
43             'status' => false,
44             'message' => 'provide an id'
45         ], REST_Controller::HTTP_BAD_REQUEST);
46     } else {
47         if ($this->mahasiswa->deleteMahasiswa($id) > 0) {
48             $this->response([
49                 'status' => true,
50                 'id' => $id,
51                 'message' => 'deleted'
52             ], REST_Controller::HTTP_OK);
53         } else {
54             $this->response([
55                 'status' => false,
56                 'message' => 'id not found!'
57             ], REST_Controller::HTTP_BAD_REQUEST);
58         }
59     }
60 }
61

```

```

61
62 // Post
63 public function index_post(){
64     $data = [
65         'nrp' => $this->post('nrp'),
66         'nama' => $this->post('nama'),
67         'email' => $this->post('email'),
68         'jurusan' => $this->post('jurusan'),
69     ];
70
71     if ($this->mahasiswa->createMahasiswa($data) > 0) {
72         $this->response([
73             'status' => true,
74             'message' => 'new mahasiswa has been created'
75         ], REST_Controller::HTTP_CREATED);
76     } else {
77         $this->response([
78             'status' => false,
79             'message' => 'failed to create new data'
80         ], REST_Controller::HTTP_BAD_REQUEST);
81     }
82 }
83

```

```

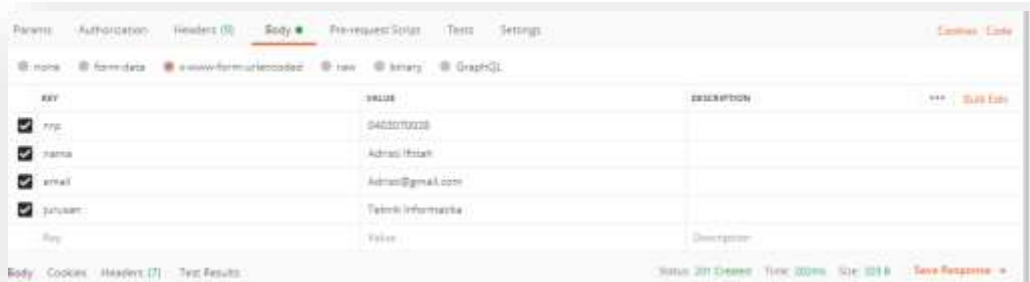
82
83
84 // Put
85 public function index_put(){
86     $id = $this->put('id');
87     $data = [
88         'nrp' => $this->put('nrp'),
89         'nama' => $this->put('nama'),
90         'email' => $this->put('email'),
91         'jurusan' => $this->put('jurusan'),
92     ];
93     if ($this->mahasiswa->updateMahasiswa($data, $id) > 0) {
94         $this->response([
95             'status' => true,
96             'message' => 'new mahasiswa has been updated'
97         ], REST_Controller::HTTP_OK);
98     } else {
99         $this->response([
100             'status' => false,
101             'message' => 'failed to update data'
102         ], REST_Controller::HTTP_BAD_REQUEST);
103     }
104 }
105 }
106 >>
107

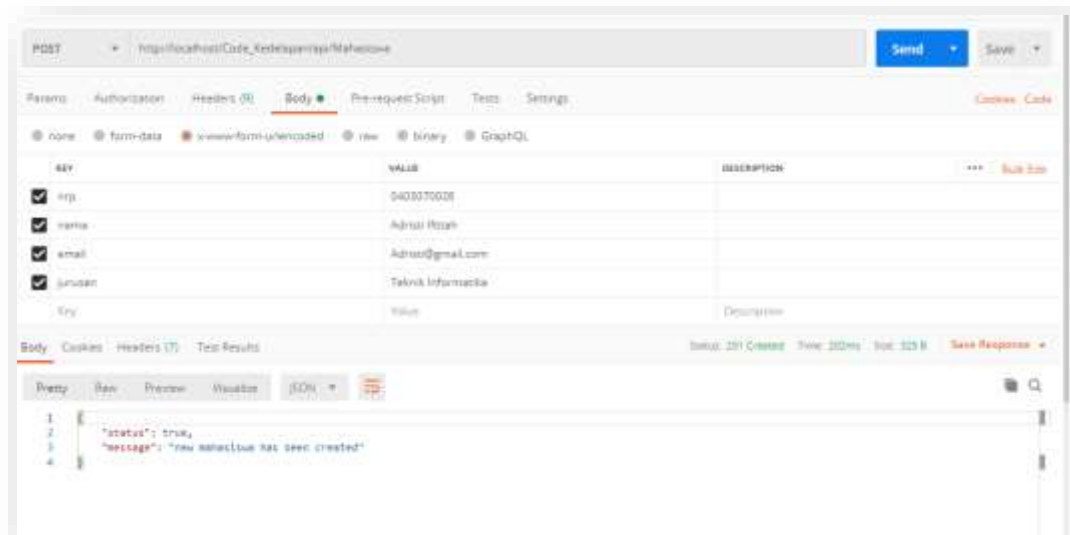
```

5. Dan lanjutkan kode pada file Mahasiswa\_model.php:

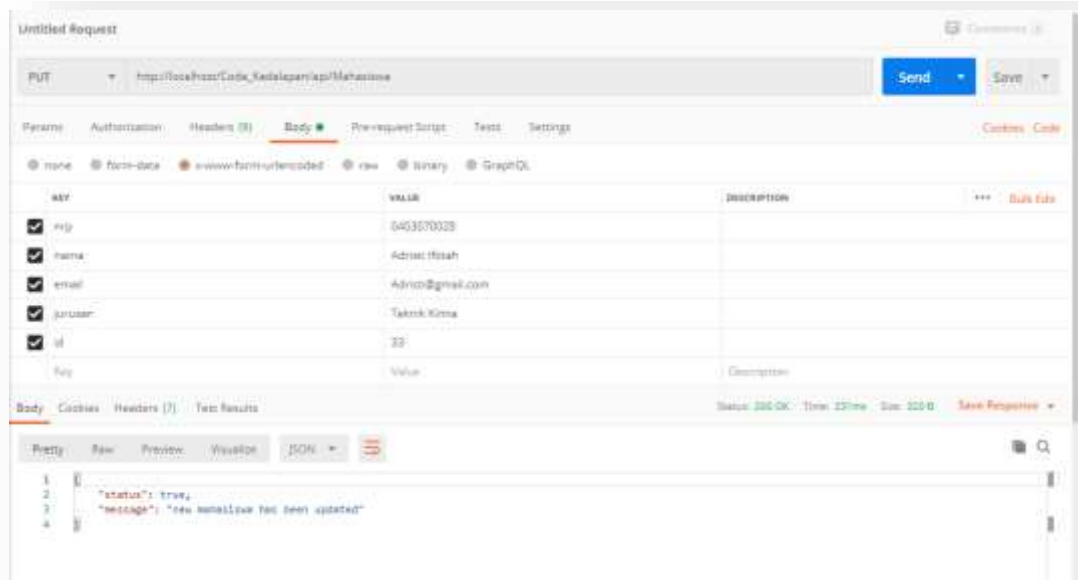
```
1 <?php
2
3 defined('BASEPATH') OR exit('No direct script access allowed');
4
5 class Mahasiswa_model extends CI_Model {
6
7     public function getMahasiswa($id=null){
8         if ($id == null) {
9             return $this->db->get('mahasiswa')->result_array();
10        } else {
11            return $this->db->get_where('mahasiswa', ['id' => $id])->result
12        }
13    }
14
15    public function deleteMahasiswa($id){
16        $this->db->delete('mahasiswa', ['id' => $id]);
17        return $this->db->affected_rows();
18    }
19
20    public function createMahasiswa($data){
21        $this->db->insert('mahasiswa', $data);
22        return $this->db->affected_rows();
23    }
24
25    public function updateMahasiswa($data, $id){
26        $this->db->update('mahasiswa', $data, ['id' => $id]);
27        return $this->db->affected_rows();
28    }
29
30 }
31
32
33
34
35 /* End of file Mahasiswa_model.php */
36
37 ?>
```

6. Selanjutnya lakukan operasi Create data pada aplikasi postman, untuk operasi Create, Update dan Delete, arahkan parameter ke Body dan x-www-form-urlencoded seperti berikut:





7. Lakukan juga operasi Update data pada aplikasi postman, masukkan parameter id seperti berikut:



8. Lakukan juga operasi Delete data pada aplikasi postman, parameter yang dimasukkan cukup id saja, seperti berikut:



DELETE <http://localhost:3000/api/users/1> [Send](#) [Save](#)

Params Authentication Headers (0) **Body** [View request Script](#) Tests Settings [Custom Code](#)

[Route](#) [Form Data](#) [www-form-urlencoded](#) [JSON](#) [Binary](#) [GraphQL](#)

| key       | value                    | DESCRIPTION | <a href="#">Add</a> | <a href="#">Edit</a> |
|-----------|--------------------------|-------------|---------------------|----------------------|
| id        | 1                        |             |                     |                      |
| username  | john.doe                 |             |                     |                      |
| email     | john.doe@gmail.com       |             |                     |                      |
| password  | password123              |             |                     |                      |
| isDeleted | 0                        |             |                     |                      |
| createdAt | 2023-10-27T10:00:00.000Z |             |                     |                      |
| updatedAt | 2023-10-27T10:00:00.000Z |             |                     |                      |

Body Cookies Headers (0) Test Results Status: 200 OK Time: 190ms Size: 507B [View Response](#)

[Pretty](#) [Raw](#) [Preview](#) [Visualize](#) [JSON](#) [JSON](#)

```
1 {
2   "status": true,
3   "id": "1",
4   "message": "deleted"
5 }
```