

Latihan Mandiri Pendalaman NodeJS

Dalam latihan ini, akan dijelaskan proses membuat aplikasi Create, Read, Update dan Delete dengan menggunakan NodeJS.

1. Buat database dengan nama db_nodejs, kemudian buat table dengan perintah berikut:

```
CREATE TABLE IF NOT EXISTS `product` (  
  `product_id` int(11) NOT NULL AUTO_INCREMENT,  
  `product_name` varchar(200) DEFAULT NULL,  
  `product_price` int(11) DEFAULT NULL,  
  PRIMARY KEY (`product_id`)  
);
```

```
MariaDB [db_nodejs]> desc product;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra          |  
+-----+-----+-----+-----+-----+-----+  
| product_id     | int(11)       | NO   | PRI | NULL    | auto_increment |  
| product_name   | varchar(200)  | YES  |     | NULL    |                |  
| product_price  | int(11)       | YES  |     | NULL    |                |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.059 sec)
```

2. Buat directory baru dengan perintah
mkdir crudjs
cd crudjs
npm init

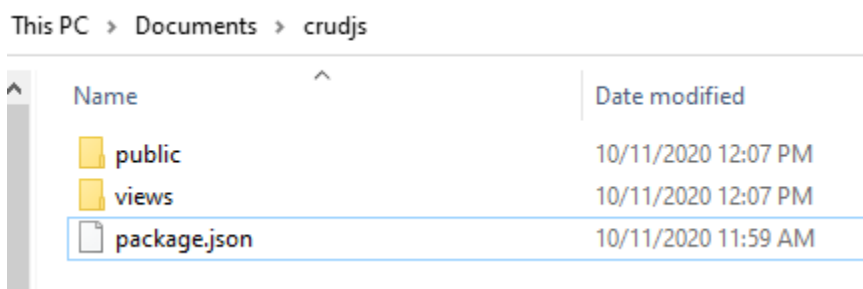
```
C:\WINDOWS\system32\cmd.exe
C:\Users\sugiartha\Documents>mkdir crudjs
C:\Users\sugiartha\Documents>cd crudjs
C:\Users\sugiartha\Documents\crudjs>npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields
and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (crudjs)
version: (1.0.0)
description:
entry point: (index.js)
test command:
git repository:
keywords:
author:
license: (ISC)
About to write to C:\Users\sugiartha\Documents\crudjs\package.json:
{
  "name": "crudjs",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "",
  "license": "ISC"
}
Is this OK? (yes) yes
C:\Users\sugiartha\Documents\crudjs>
```

3. Di dalam folder crudjs, buat 2 folder baru yaitu public dan views

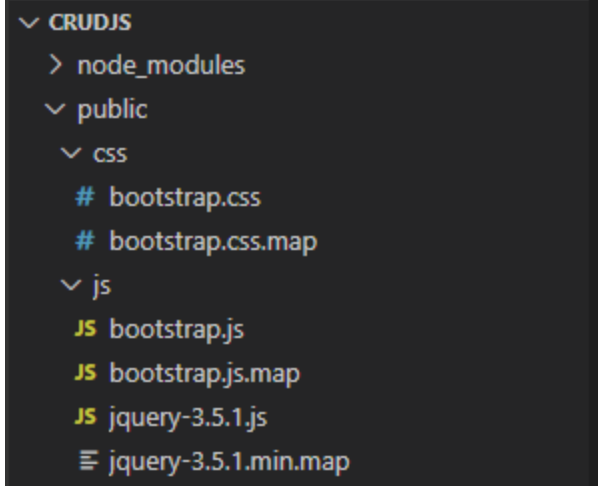


4. Download bootstrap <https://getbootstrap.com> dan jquery <https://jquery.com>

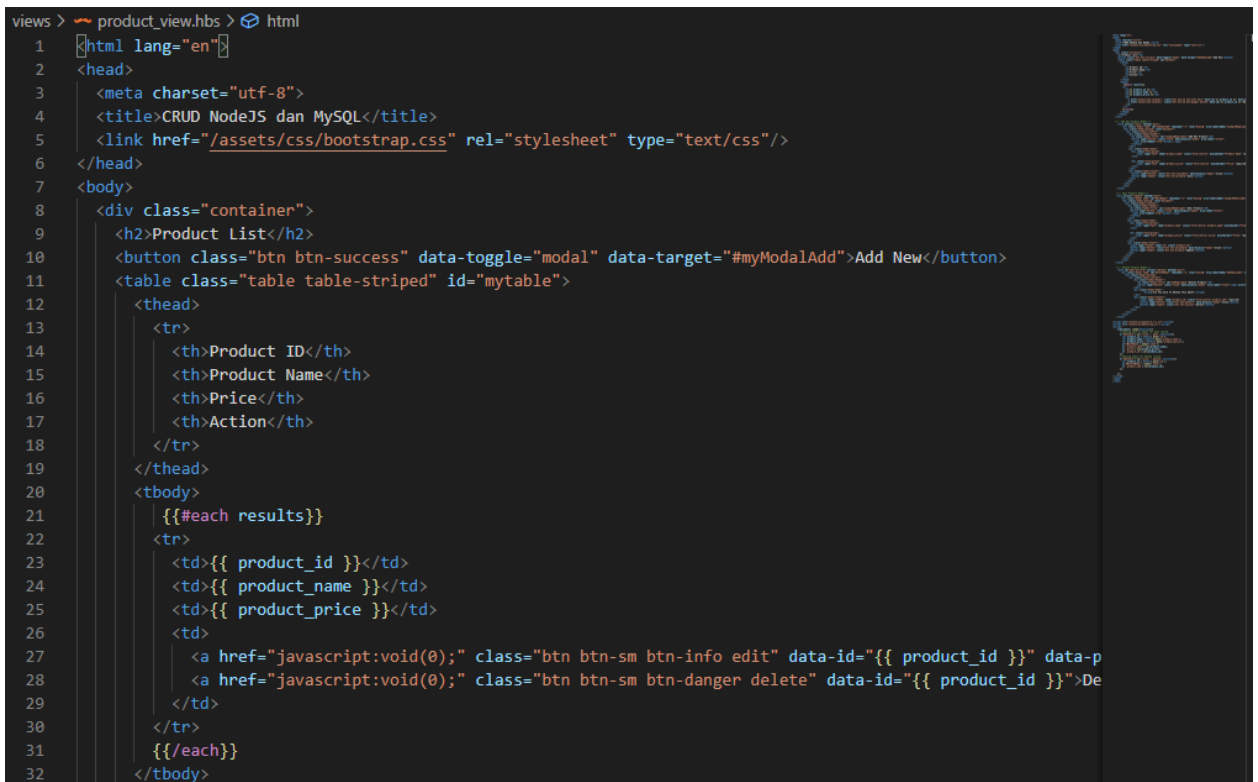
Selanjutnya buat folder css dan folder js didalam folder public.

Kemudian copy file bootstrap.css yang telah di download sebelumnya kedalam folder public/css/.

Dan copy file bootstrap.js dan jquery pada folder public/js/.



5. Di dalam folder views buat 1 buah file dengan nama product_view.hbs



```

33     </table>
34 </div>
35
36 <!-- Add New Product Modal-->
37 <form action="/save" method="post">
38     <div class="modal fade" id="myModalAdd" tabindex="-1" role="dialog" aria-labelledby="exampleModallab
39     <div class="modal-dialog" role="document">
40         <div class="modal-content">
41             <div class="modal-header">
42                 <h5 class="modal-title" id="exampleModallabel">Add New Product</h5>
43                 <button type="button" class="close" data-dismiss="modal" aria-label="Close">
44                     <span aria-hidden="true">&times;</span>
45                 </button>
46             </div>
47             <div class="modal-body">
48                 <div class="form-group">
49                     <input type="text" name="product_name" class="form-control" placeholder="Product Name" re
50                 </div>
51
52                 <div class="form-group">
53                     <input type="text" name="product_price" class="form-control" placeholder="Price" required
54                 </div>
55             </div>
56             <div class="modal-footer">
57                 <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
58                 <button type="submit" class="btn btn-primary">Save</button>
59             </div>
60         </div>
61     </div>
62 </div>
63 </form>

```

```

65 <!-- Edit Product Modal-->
66 <form action="/update" method="post">
67     <div class="modal fade" id="EditModal" tabindex="-1" role="dialog" aria-labelledby="exampleModallabel
68     <div class="modal-dialog" role="document">
69         <div class="modal-content">
70             <div class="modal-header">
71                 <h5 class="modal-title" id="exampleModallabel">Edit Product</h5>
72                 <button type="button" class="close" data-dismiss="modal" aria-label="Close">
73                     <span aria-hidden="true">&times;</span>
74                 </button>
75             </div>
76             <div class="modal-body">
77                 <div class="form-group">
78                     <input type="text" name="product_name" class="form-control product_name" placeholder="Prod
79                 </div>
80
81                 <div class="form-group">
82                     <input type="text" name="product_price" class="form-control price" placeholder="Price" req
83                 </div>
84             </div>
85             <div class="modal-footer">
86                 <input type="hidden" name="id" class="product_id">
87                 <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
88                 <button type="submit" class="btn btn-primary">Update</button>
89             </div>
90         </div>
91     </div>
92 </div>
93 </form>

```

```

95 <!-- Delete Product Modal-->
96 <form id="add-row-form" action="/delete" method="post">
97   <div class="modal fade" id="DeleteModal" tabindex="-1" role="dialog" aria-labelledby="myModallabel" a
98     <div class="modal-dialog">
99       <div class="modal-content">
100         <div class="modal-header">
101           <h5 class="modal-title" id="myModallabel">Delete Product</h5>
102           <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-h
103         </div>
104         <div class="modal-body">
105           <strong>Are You Sure To Delete This Data?</strong>
106         </div>
107         <div class="modal-footer">
108           <input type="hidden" name="product_id" class="form-control product_id2" required>
109           <button type="button" class="btn btn-default" data-dismiss="modal">Close</button>
110           <button type="submit" class="btn btn-success">Delete</button>
111         </div>
112       </div>
113     </div>
114   </div>
115 </form>

```

```

117 <script src="/assets/js/jquery-3.3.1.js"></script>
118 <script src="/assets/js/bootstrap.js"></script>
119 <script>
120   $(document).ready(function(){
121     //showing data to modal for edit record
122     $('#mytable').on('click', '.edit', function(){
123       var product_id = $(this).data('id');
124       var product_name = $(this).data('product_name');
125       var product_price = $(this).data('product_price');
126       $('#EditModal').modal('show');
127       $('.product_name').val(product_name);
128       $('.price').val(product_price);
129       $('.product_id').val(product_id);
130     });
131     //showing modal for delete record
132     $('#mytable').on('click', '.delete', function(){
133       var product_id = $(this).data('id');
134       $('#DeleteModal').modal('show');
135       $('.product_id2').val(product_id);
136     });
137   });
138 </script>
139 </body>
140 </html>

```

6. Buat 1 buah file js di dalam project crudjs dengan nama index.js

This PC > Documents > crudjs

Name	Date modified	Type	Size
public	10/11/2020 12:20 PM	File folder	
views	10/11/2020 12:07 PM	File folder	
index.js	10/11/2020 10:55 AM	JavaScript File	2 KB
package.json	10/11/2020 11:59 AM	JSON File	1 KB

Isi file dari index.js sebagai berikut:

```
JS index.js > ...
1  //use path module
2  const path = require('path');
3  //use express module
4  const express = require('express');
5  //use hbs view engine
6  const hbs = require('hbs');
7  //use bodyParser middleware
8  const bodyParser = require('body-parser');
9  //use mysql database
10 const mysql = require('mysql');
11 const app = express();
12
13 //Create Connection
14 const conn = mysql.createConnection({
15   host: 'localhost',
16   user: 'root',
17   password: '',
18   database: 'db_nodejs'
19 });
20
21 //connect to database
22 conn.connect((err) =>{
23   if(err) throw err;
24   console.log('Mysql Connected...');
25 });
26
27 //set views file
28 app.set('views',path.join(__dirname,'views'));
29 //set view engine
30 app.set('view engine', 'hbs');
31 app.use(bodyParser.json());
32 app.use(bodyParser.urlencoded({ extended: false }));
33 //set folder public as static folder for static file
34 app.use('/assets',express.static(__dirname + '/public'));
35
36 //route for homepage
37 app.get('/',(req, res) => {
38   let sql = "SELECT * FROM product";
39   let query = conn.query(sql, (err, results) => {
40     if(err) throw err;
41     res.render('product_view',{
42       results: results
43     });
44   });
45 });
```

```

47 //route for insert data
48 app.post('/save',(req, res) => {
49   let data = {product_name: req.body.product_name, product_price: req.body.product_price};
50   let sql = "INSERT INTO product SET ?";
51   let query = conn.query(sql, data,(err, results) => {
52     if(err) throw err;
53     res.redirect('/');
54   });
55 });
56
57 //route for update data
58 app.post('/update',(req, res) => {
59   let sql = "UPDATE product SET product_name='"+req.body.product_name+"', product_price='"+req.body.product_
60   let query = conn.query(sql, (err, results) => {
61     if(err) throw err;
62     res.redirect('/');
63   });
64 });
65
66 //route for delete data
67 app.post('/delete',(req, res) => {
68   let sql = "DELETE FROM product WHERE product_id="+req.body.product_id+"";
69   let query = conn.query(sql, (err, results) => {
70     if(err) throw err;
71     res.redirect('/');
72   });
73 });

```

```

75 //server listening
76 app.listen(8000, () => {
77   console.log('Server is running at port 8000');
78 });

```

7. Install modul path, express, hbs, body-parser dan mysql.
Cara installasi modul dengan perintah npm install <nama-modul>

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: powershell
PS C:\Users\sugiartha\Documents\crudjs> npm install path
npm notice created a lockfile as package-lock.json. You should commit this file.
npm WARN crudjs@1.0.0 No description
npm WARN crudjs@1.0.0 No repository field.

+ path@0.12.7
added 4 packages from 2 contributors and audited 4 packages in 2.28s
found 0 vulnerabilities

PS C:\Users\sugiartha\Documents\crudjs>

```

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: powershell
PS C:\Users\sugiartha\Documents\crudjs> npm install express
npm WARN crudjs@1.0.0 No description
npm WARN crudjs@1.0.0 No repository field.

+ express@4.17.1
found 0 vulnerabilities

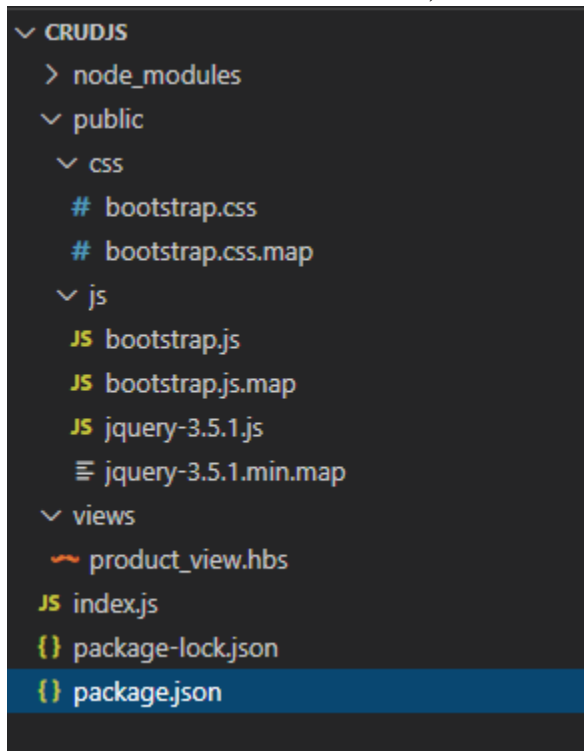
PS C:\Users\sugiartha\Documents\crudjs> npm install hbs
npm WARN crudjs@1.0.0 No description
npm WARN crudjs@1.0.0 No repository field.

+ hbs@4.1.1
found 0 vulnerabilities

PS C:\Users\sugiartha\Documents\crudjs> npm install body-parser
npm WARN crudjs@1.0.0 No description
npm WARN crudjs@1.0.0 No repository field.

```

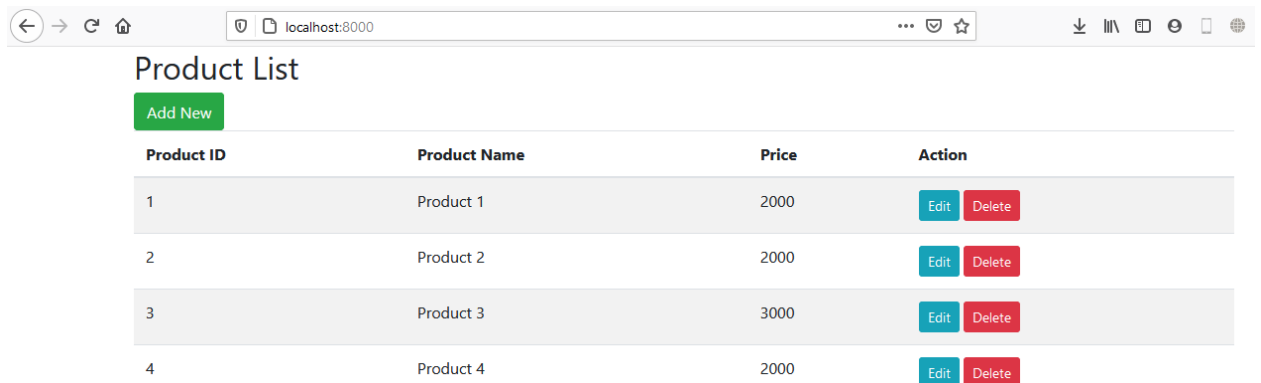
8. Jika semua modul telah di install, maka directory project akan tampil seperti berikut:



9. Jalankan index.js dengan perintah node index.js



10. Buka browser dan ketik pada URL: <http://localhost:8000>



Source code: <https://gitlab.com/sugiartha/latihan-crud-nodejs>