Contoh Aplikasi CRUD

CRUD dengan data Json

Sebelumnya install modul-modul berikut pada folder project:

npm install express

npm install ejs

npm install express-ejs-layouts

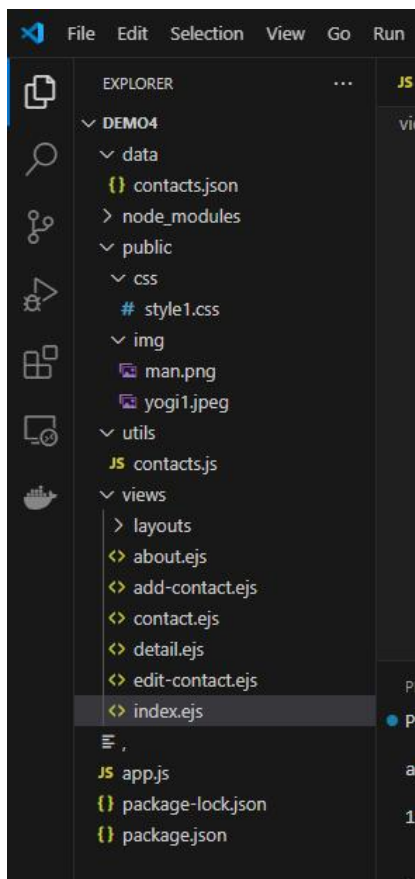npm install express-session

npm install express-validator

npm install connect-flash

npm install cookie-parser

Struktur Project:

app.js

```javascript
const express = require('express')
const app = express()
const port = 3000
const expressLayouts = require('express-ejs-layouts')
const
{loadContact,findContact,addContacts,cekDuplikat,deleteContact,updateContacts} =
require('./utils/contacts');
const {body,validationResult,check} = require('express-validator');
const session=require('express-session');
const cookieParser=require('cookie-parser');
const flash=require('connect-flash');
// const morgan = require('morgan');


app.set('view engine','ejs')
app.use(expressLayouts);
// app.use(morgan('dev'));
app.use(express.static('public'));
app.use(express.urlencoded());

//konfigurasi flash
app.use(cookieParser('secret'));
app.use(session({
  cookie:{maxAge: 6000},
  secret:'secret',
  resave:true,
  saveUnitialized: true,
  }
 )
);

app.use(flash());

app.get('/', (req, res) => {
  const
mhs=[{nama:'agus',email:'agus@gmail.com'},{nama:'ani',email:'ani@gmail.com'}];
    res.render('index',{
    nama:'paidjo',
    title:'Halaman home',
    mhs:mhs,
    layout:'layouts/main-layout',
  });
})
```

```
app.get('/about', (req, res) => {
  res.render('about',{
    layout:'layouts/main-layout',
    title:'Halaman About'
  });
})

app.get('/contact', (req, res) => {
  const contacts = loadContact();
  //console.log(contacts);
  res.render('contact',{
    layout:'layouts/main-layout',
    title:'Halaman Contact',
    contacts:contacts,
    msg:req.flash('msg'),
  });
})
// tambah data contact
app.get('/contact/add', (req, res) => {
  res.render('add-contact',{
    layout:'layouts/main-layout',
    title:'Form Tambah Data Contact',
  });
});


// app.post('/contact', (req, res) => {
//   addContacts(req.body);
//   res.redirect('/contact');
// });
app.post('/contact',[
  body('nama').custom((value)=>{
    const duplikat=cekDuplikat(value);
    if(duplikat){
      throw new Error('nama sdh ada..');
    }
    return true;
  }),
  check('email','email salah').isEmail(),
  check('nohp','nohp salah').isMobilePhone('id-ID')
], (req, res) => {
  const errors=validationResult(req);
  if (!errors.isEmpty()){
    //return res.status(400).json({errors:errors.array()});
    res.render('add-contact',{
```

```
      title:'Form Tambah Data Contact',
      layout:'layouts/main-layout',
      errors:errors.array(),
    });
  }else{
    addContacts(req.body);
    req.flash('msg','Data contact berhasil ditambahkan..')
    res.redirect('/contact');
  }
});

//proses delete
app.get('/contact/delete/:nama',(req,res)=>{
  const contact=findContact(req.params.nama);
  if(!contact){
   res.status(404);
   res.send('404');
  } else{
    //res.send('OK');
    deleteContact(req.params.nama);
    req.flash('msg','Data contact berhasil dihapus..')
    res.redirect('/contact');
  }
});
//form edit
app.get('/contact/edit/:nama', (req, res) => {
  const contact= findContact(req.params.nama);
  res.render('edit-contact',{
    layout:'layouts/main-layout',
    title:'Form Edit Data Contact',
    contact,
  });
});

//pross edit data
app.post('/contact/update',[
  body('nama').custom((value ,{req}  )=>{
    const duplikat=cekDuplikat(value);
    if(value!==req.body.nama_lama  && duplikat){
       throw new Error('nama sdh ada..');
    }
    return true;
  }),
  check('email','email salah').isEmail(),
  check('nohp','nohp salah').isMobilePhone('id-ID')
```

```javascript
], (req, res) => {
  const errors=validationResult(req);
  if (!errors.isEmpty()){
    //return res.status(400).json({errors:errors.array()});
    res.render('edit-contact',{
      title:'Form Edit Data Contact',
      layout:'layouts/main-layout',
      errors:errors.array(),
      contact:req.body,
    });
  }else{
    updateContacts(req.body);
    req.flash('msg','Data contact berhasil diupdate..');
    res.redirect('/contact');
  }
});


app.get('/contact/:nama', (req, res) => {
  const contact = findContact(req.params.nama);
  res.render('detail',{
    layout:'layouts/main-layout',
    title:'Halaman Detail Contact',
    contact,
  });
})
app.listen(port, () => {
    console.log(`Example app listening on port ${port}`);
  })
```

utils/contacts.js

```javascript
const fs = require('fs');

//buat folder jika blm ada
const dirPath="./data";
if (!fs.existsSync(dirPath)){
  fs.mkdirSync(dirPath);
}
//buat file contacts.json
const dataPath="./data/contacts.json";
if (!fs.existsSync(dataPath)){
    fs.writeFileSync(dataPath,'[]','utf-8');
}
```

```javascript
//ambil semua data contacts
const loadContact=()=>{
  const fileBuffer=fs.readFileSync('data/contacts.json','utf-8');
  const contacts=JSON.parse(fileBuffer);
  return contacts;
};
const findContact=(nama)=>{
    const contacts=loadContact();
    const
contact=contacts.find((contact)=>contact.nama.toLowerCase()===nama.toLowerCase());
    return contact;
  };
//menimpa file contacts dg baru
const saveContacts = (contacts)=>{
  fs.writeFileSync('data/contacts.json',JSON.stringify(contacts));
}

//menambahkan data contact baru
const addContacts = (contact)=>{
  const contacts = loadContact();
  contacts.push(contact);
  saveContacts(contacts);
}
//cek duplikat
const cekDuplikat = (nama)=>{
  const contacts = loadContact();
  return contacts.find((contact)=>contact.nama===nama);
}
//delete Contact
const deleteContact = (nama)=>{
  const contacts = loadContact();
  const filteredContacts=contacts.filter((contact)=>contact.nama!==nama);
  saveContacts(filteredContacts);
  //console.log(filteredContacts);
  //return contacts.find((contact)=>contact.nama===nama);
}
const updateContacts = (contact_baru)=>{
  const contacts = loadContact();
  const
filteredContacts=contacts.filter((contact)=>contact.nama!==contact_baru.nama_lama)
;
  delete contact_baru.nama_lama ;
  filteredContacts.push(contact_baru);
  saveContacts(filteredContacts);
```

```
  //console.log(filteredContacts,contact_baru);
  //return contacts.find((contact)=>contact.nama===nama);
}

module.exports={loadContact,findContact,addContacts,cekDuplikat,deleteContact,upd
ateContacts};
```

views/contact.ejs

```
<div class="container mt-3">
    <div class="row">
    <div class="col-md-8">
    <h2>Daftar Contact</h2>
    <a href="/contact/add" class="btn btn-primary mb-2"> Tambah Data </a>
    <%if (msg.length!==0){%>
      <div class="alert alert-success" role="alert">
          <%= msg%>
      </div>
  <%}%>

    <table class="table">
        <thead>
          <tr>
            <th scope="col">#</th>
            <th scope="col">Nama</th>
            <th scope="col">Telp</th>
            <th scope="col">Aksi</th>
          </tr>
        </thead>
        <tbody>
            <%if (contacts.length===0){%>
                <div class="alert alert-danger fw-bold" role="alert">
                    data contact kosong
                </div>
            <%}else{%>
                <% nmr=0;
                   contacts.forEach(c=>{
                   nmr=nmr+1;
                   %>
                   <tr>
                    <th scope="row"><%= nmr %></th>
                    <td><%= c.nama %></td>
                    <td><%= c.nohp %></td>
```

```
                      <td><a href="/contact/<%= c.nama %>" class="btn btn-success
badge rounded-pill"><i class="bi bi-info-circle"></i> Detail</a></td>
                  </tr>
                  <%
                  });
              }%>

          </tbody>
       </table>
    </div>
    </div>
    </div>
```

views/details.ejs

```
<div class="container mt-3">
    <div class="row">
        <div class="col-md-8">
            <h2>Detail Contact </h2>
            <%if (!contact){%>
                <div class="alert alert-danger fw-bold" role="alert">
                    data contact ga ono rek <br /><a href="/contact"
class="alert-link fw-normal">&laquoback to Contacts</a>.
                </div>
            <%}else{%>
                <div class="card" style="width: 18rem;">
                    <div class="card-body">
                        <h5 class="card-title"><%= contact.nama %></h5>
                        <h6 class="card-subtitle mb-2 text-body-secondary"><%=
contact.nohp %></h6>
                        <p class="card-text"><%= contact.email %></p>
                        <a href="/contact/delete/<%= contact.nama %>" class="btn
btn-danger badge" onclick="return confirm('data dihapus?')">Delete</a>
                        <a href="/contact/edit/<%= contact.nama %>" class="btn btn-
info badge">Edit</a>
                        <a href="/contact" class="card-link d-block mt-
3">Back</a>
                    </div>
                </div>
            <%}%>
        </div>
    </div>
</div>
```

views/add-contact.ejs

```
<div class="container mt-3">
    <div class="row">
        <div class="col-md-6">
            <h2>Form Tambah data Contact</h2>
            <% if (typeof errors !='undefined'){ %>
                <div class="alert alert-danger" role="alert">
                    <ul>
                        <% errors.forEach(error=>{ %>
                            <li><%=
error.msg  %></li>
                        <% }) %>

                    </ul>
                </div>
            <% } %>
            <form method="POST" action="/contact">
            <div class="mb-3">
                <label for="inpNama" class="form-label">Nama Contact</label>
                <input type="text" class="form-control" id="inpNama"
name="nama">
            </div>
            <div class="mb-3">
                <label for="inpNoHp" class="form-label">Nomor HP</label>
                <input type="text" class="form-control" id="inpNoHp"
name="nohp">
            </div>
            <div class="mb-3">
                <label for="inpEmail" class="form-label">Email address</label>
                <input type="email" class="form-control" id="inpEmail"
name="email">
            </div>

            <button type="submit" class="btn btn-primary">Tambah Data</button>
            </form>
        </div>
    </div>
</div>
```

views/edit-contact.ejs

```
<div class="container mt-3">
    <div class="row">
        <div class="col-md-6">
            <h2>Form Edit data Contact</h2>
            <% if (typeof errors !='undefined'){ %>
                <div class="alert alert-danger" role="alert">
                    <ul>
                        <% errors.forEach(error=>{ %>
                            <li><%=
error.msg  %></li>
                        <% }) %>

                    </ul>
                </div>
            <% } %>
            <form method="POST" action="/contact/update">
                <input type="hidden" name="nama_lama" value="<%=
(contact.nama_lama)?contact.nama_lama:contact.nama %>">
            <div class="mb-3">
                <label for="inpNama" class="form-label">Nama Contact</label>
                <input type="text" class="form-control" id="inpNama" name="nama"
value="<%= contact.nama %>">
            </div>
            <div class="mb-3">
                <label for="inpNoHp" class="form-label">Nomor HP</label>
                <input type="text" class="form-control" id="inpNoHp" name="nohp"
value="<%= contact.nohp %>">
            </div>
            <div class="mb-3">
                <label for="inpEmail" class="form-label">Email address</label>
                <input type="email" class="form-control" id="inpEmail"
name="email" value="<%= contact.email %>">
            </div>

            <button type="submit" class="btn btn-primary">Edit Data</button>
            </form>
        </div>
    </div>
</div>
```

Untuk sourcode dari file-file berikut sama dengan di project Latihan1 sebelumnya:

data/contacts.json

css/style1.css

views/layouts/main-layout.ejs

views/layouts/nav.ejs

views/about.ejs

views/index.ejs

File Edit View History Bookmarks Tools Help

Angel Paff - Pernahkah Dulu - ✕ | Halaman Contact ✕ +

← → C localhost:3000/contact ☆ Q Search

App Contact Home About Contact Disabled

Daftar Contact

Tambah Data

#	Nama	Telp	Aksi
1	slamet Wegiman	08123456555	ⓘ Detail
2	Kromo Martodirejo Prawiro	08123456666	ⓘ Detail
3	Karno Saputro Legowo	0812349999	ⓘ Detail
4	Andi Prawiro Direjo	081223344	ⓘ Detail

File Edit View History Bookmarks Tools Help

Angel Paff - Pernahkah Dulu - ✕ | Form Tambah Data Contact ✕ +

← → C localhost:3000/contact/add ☆ Q Search

App Contact Home About Contact Disabled

Form Tambah data Contact

Nama Contact

[   ]

Nomor HP

[   ]

Email address

[   ]

Tambah Data

File Edit View History Bookmarks Tools Help

Angel Paff - Pernahkah Dulu - × | Halaman Detail Contact × +

localhost:3000/contact/slamet Wegiman

Q Search

App Contact Home About Contact Disabled

Detail Contact

slamet Wegiman
08123456555
slamet@gmail.com

Delete Edit

Back