

**TUGAS MODUL 12 PRAKTIKUM
PENGEMBANGAN APLIKASI WEBSITE
(PAW)**



oleh:

Kyla Salsabillah (IS-06-03 - 1204230061)


**PROGRAM STUDI SISTEM INFORMASI
FAKULTAS REKAYASA INDUSTRI
TELKOM UNIVERSITY SURABAYA
2024**

1. Generate Laravel Project dan Laravel UI

- buat project laravel baru via composer “composer create-project modul-5-clone”
- masuk kedalam folder project laravel yang baru saja dibuat, kemudian install package Laravel UI dgn “composer require laravel/ui”
- generate scaffolding buat project laravel berbasis css framework Bootstrap dgn “php artisan ui bootstrap”
- jalankan script “npm install” buat compile scaffolding Bootstrap yang barusan disetup
- jalankan script “npm artisan serve” buat mengaktifkan local development server Laravel biar bisa akses dibrowser

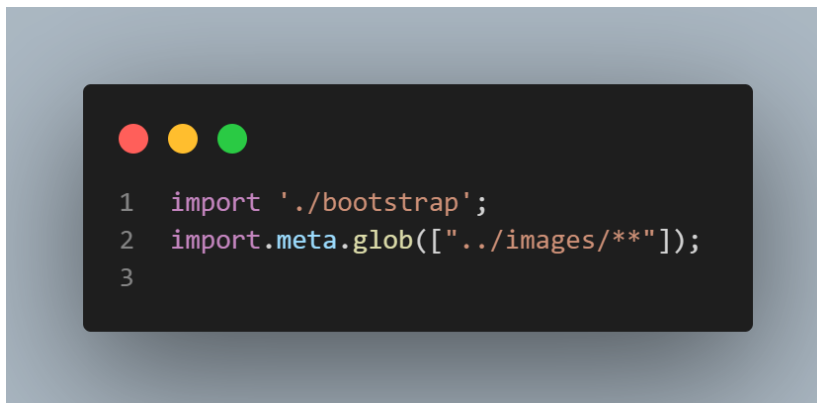
2. Bundling Asset dengan Vite

- download dan install NodeJS <https://nodejs.org/en/download/>
- mengecek hasil instalasi dgn masukan perintah “node -v” “npm -v”
- install semua dependencies buat Bundling Asset dgn Vite perintah “npm install”

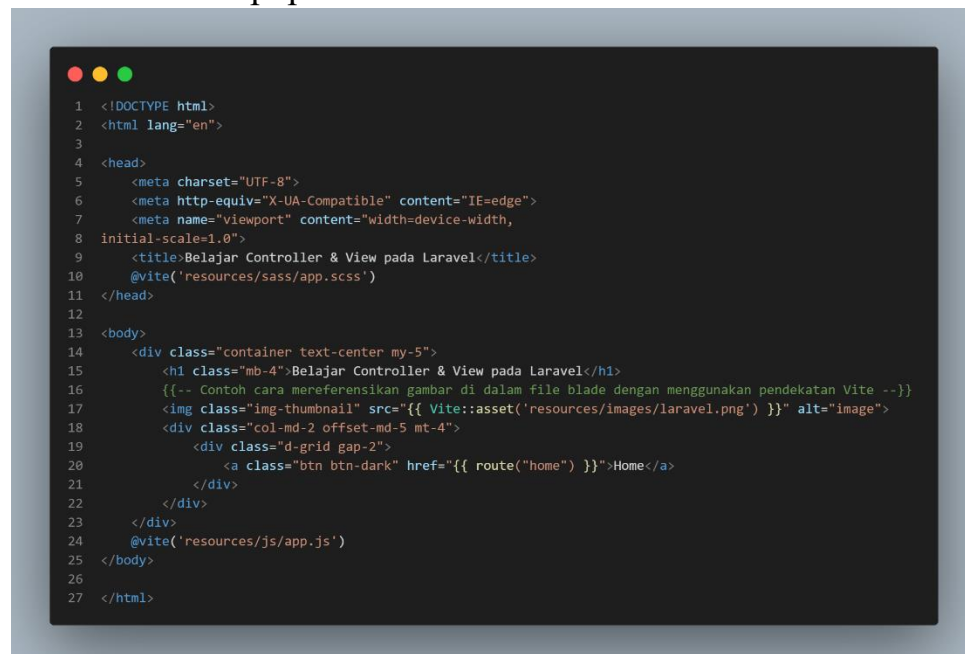


```
1 import { defineConfig } from 'vite';
2 import laravel from 'laravel-vite-plugin';
3
4 export default defineConfig({
5   plugins: [
6     laravel({
7       input: [
8         'resources/sass/app.scss',
9         'resources/js/app.js',
10      ],
11      refresh: true,
12    }),
13  ],
14 });
```

3. terapkan fitur “Processing Static Assets With Vite” dgn buka file /resources/js/app.js lalu sesuaikan kode program seperti dimodul. Vite akan merujuk pada path direktori



4. Welcome.blade.php



- @vite('resources/js/app.js') digunakan buat mengimpor file JavaScript dari resources/js/app.js menggunakan vite
 - @vite('resources/sass/app.scss') digunakan buat mengimpor file scss (css preprocessor) melalui vite, build tool modern yg digunakan di Laravel
 - kode ini kerangka dasar halaman web dgn integrasi Laravel Blade, Vite, dan Bootstrap
 - hapus seluruh kode program yg ada kemudian letakkan dan arahkan file css dan javascript yg telah didefinisikan diatas, pada file view (blade) menggunakan Blade Directive @vite()
5. install Bootstrap dan Bootstrap Icons Terbaru pada Project Laravel
 - buat menginstal bootstrap masukan perintah “npm install bootstrap@5.3.0-alpha3 bootstrap-icons @popperjs/core”
 - buka file resources\sass\app.scss dan tambahkan kode sesuai modul

```
1 @import 'bootstrap/scss/bootstrap';
2 @import "bootstrap-icons/font/bootstrap-icons.css";
3
```

6. halaman home

- buka file /routes/web.php kemudian buat Route dgn kode sesuai modul

```
1 Route::get('home', [HomeController::class, 'index'])->name('home');
```

```
1 use App\Http\Controllers\HomeController;
```

```
1 <?php
2
3 namespace App\Http\Controllers;
4
5 use Illuminate\Http\Request;
6
7 class HomeController extends Controller
8 {
9     //
10    function index()
11    {
12        $pageTitle = 'Home';
13        return view('home', ['pageTitle' => $pageTitle]);
14    }
15 }
16
```

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5     <meta charset="UTF-8">
6     <meta http-equiv="X-UA-Compatible" content="IE=edge">
7     <meta name="viewport" content="width=device-width, initial-scale=1.0">
8     <title>{{ $pageTitle }}</title>
9     @vite('resources/sass/app.scss')
10 </head>
11
12 <body>
13     <nav class="navbar navbar-expand-md navbar-dark bg-primary">
14         <div class="container">
15             <a href="{{ route('home') }}" class="navbar-brand">Data Master</a>
16             <button type="button" class="navbar-toggler" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent">
17                 <span class="navbar-toggler-icon"></span>
18             </button>
19             <div class="collapse navbar-collapse" id="navbarSupportedContent">
20                 <ul class="navbar-nav flex-row flex-wrap">
21                     <li class="nav-item col-2 col-md-auto"><a href="{{ route('home') }}" class="nav-link active">Home</a></li>
22                     <li class="nav-item col-2 col-md-auto"><a href="{{ route('employees.index') }}" class="nav-link">Employee List</a></li>
23                 </ul>
24                 <div class="d-lg-none text-white-50">
25                     <a href="{{ route('profile') }}" class="btn btn-outline-light my-2 ms-md-auto"><span class="bi-person-circle me-1"></span> My Profile</a>
26                 </div>
27             </div>
28         </div>
29     </nav>
30     <div class="container mt-4">
31         <h4>{{ $pageTitle }}</h4>
32         <hr>
33         <div class="d-flex align-items-center py-2 px-4 bg-light rounded-3 border">
34             <div class="bi house-fill me-3 fs-1"></div>
35             <div class="mb-0">Well done! This is {{ $pageTitle }}.</div>
36         </div>
37     </div>
38     @vite('resources/js/app.js')
39 </body>
40
41 </html>
42

```

- `<meta charset="UTF-8">`: menentukan encoding karakter buat dokumen (UTF-8 mendukung berbagai karakter internasional)
- `<meta http-equiv="X-UA-Compatible" content="IE=edge">`: memastikan kompatibilitas dgn Internet Explorer, menggunakan mode terbaru yg tersedia
- `<title>{{ $pageTitle }}</title>`: menampilkan judul halaman yg diambil dari variabel `$pageTitle` yg dikirim dari controller Laravel
- `@vite('resources/sass/app.scss')`: menghubungkan file css hasil build menggunakan Laravel Vite Plugin, file ini berisi styling buat halaman
- `route('profile')`: mengarahkan ke halaman profil pengguna
- bootstrap Icon (`bi-person-circle`): menampilkan ikon orang di sebelah teks "My Profile"
- fungsi `route` buat mendefinisikan rute http get buat url `/home`
- HomeController berada di folder `App/Http/Controllers`, yg merupakan lokasi default buat controller di Laravel

7. halaman my profile

```

1 Route::get('profile', ProfileController::class)->name('profile');

```

```

1 use App\Http\Controllers\ProfileController;

```

```

1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6
7  class ProfileController extends Controller
8  {
9      /**
10       * Handle the incoming request.
11       */
12       public function __invoke(Request $request)
13       {
14           //
15           $pageTitle = 'Profile';
16           return view('profile', ['pageTitle' => $pageTitle]);
17       }
18  }
19

```

```

1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>{{ $pageTitle }}</title>
9      @vite('resources/sass/app.scss')
10 </head>
11
12 <body>
13     <nav class="navbar navbar-expand-md navbar-dark bg-primary">
14         <div class="container">
15             <a href="{{ route('home') }}" class="navbar-brand mb-0 h1"><i class="bi-hexagon-fill me-2"></i> Data Master</a>
16             <button type="button" class="navbar-toggler" data-bs-toggle="collapse"
17                 data-bs-target="#navbarSupportedContent">
18                 <span class="navbar-toggler-icon"></span>
19             </button>
20             <div class="collapse navbar-collapse" id="navbarSupportedContent">
21                 <hr class="d-lg-none text-white-50">
22                 <ul class="navbar-nav flex-row flex-wrap">
23                     <li class="nav-item col-6 col-md-auto"><a href="{{ route('home') }}" class="nav-link">Home</a></li>
24                     <li class="nav-item col-6 col-md-auto"><a href="{{ route('employees.index') }}" class="nav-link">Employee List</a></li>
25                 </ul>
26                 <hr class="d-lg-none text-white-50">
27                 <a href="{{ route('profile') }}" class="btn btn-outline-light my-2 ms-md-auto"><i class="bi-person-circle me-1"></i> My Profile</a>
28             </div>
29         </div>
30     </nav>
31     <div class="container mt-4">
32         <h4>{{ $pageTitle }}</h4>
33         <div class="d-flex align-items-center py-2 px-4 bg-light rounded-3 border">
34             <div class="bi-person-circle me-3 fs-1"></div>
35             <div class="mb-0">Well done! this is {{ $pageTitle }}.</div>
36         </div>
37     </div>
38     @vite('resources/js/app.js')
39 </body>
40
41 </html>
42

```

- navbar navbar-expand-md: komponen Bootstrap buat membuat navigasi responsif
- bootstrap Icon: bi-hexagon-fill: menampilkan ikon heksagon dari Bootstrap icons
- data-bs-toggle="collapse": menyembunyikan elemen navbar
- <h4>{{ \$pageTitle }}</h4>: menampilkan judul halaman secara dinamis
- d-flex align-items-center: menggunakan flexbox buat menyelaraskan konten secara horizontal dan vertikal
- invokable controller yaitu controller yg hanya memiliki satu metode bernama invoke()
- \$pageTitle = 'Profile'; Variable \$pageTitle data statis yg didefinisikan buat memberikan judul halaman

8. Halaman Employee List

```
1 Route::resource('employees', EmployeeController::class);
2
```

```
1 use App\Http\Controllers\EmployeeController;
```

```
1 public function index()
2 {
3     //
4     $pageTitle = 'Employee List';
5     // RAW SQL QUERY
6     $employees = DB::select('
7     select *, employees.id as employee_id, positions.name as
8     position_name
9     from employees
10    left join positions on employees.position_id = positions.id
11 ');
12
13 return view('employee.index', [
14     'pageTitle' => $pageTitle,
15     'employees' => $employees
16 ]);
17 }
```

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>{{ $pageTitle }}</title>
9   @vite('resources/sass/app.scss')
10 </head>
11
12 <body>
13   <nav class="navbar navbar-expand md navbar-dark bg-primary">
14     <div class="container">
15       <a href="{{ route('home') }}" class="navbar-brand mb-0 h1"><i class="bi-hexagon-fill me-2"></i> Data Master</a>
16       <button type="button" class="navbar-toggler" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent">
17         <span class="navbar-toggler-icon"></span>
18       </button>
19       <div class="collapse navbar-collapse" id="navbarSupportedContent">
20         <hr class="d-lg-none text white 50">
21         <ul class="navbar-nav flex-row flex-wrap">
22           <li class="nav-item col-2 col-md-auto"><a href="{{ route('home') }}" class="nav-link">Home</a></li>
23           <li class="nav-item col-2 col-md-auto"><a href="{{ route('employees.index') }}" class="nav-link active">Employee List</a></li>
24         </ul>
25         <hr class="d-lg-none text-white-50">
26         <a href="{{ route('profile') }}" class="btn btn-outline-light my-2 ms-md-auto"><i class="bi-person-circle me-1"></i> My Profile</a>
27       </div>
28     </div>
29   </nav>
30   <div class="container mt-4">
31     <div class="row mb-0">
32       <div class="col-lg-9 col-xl-10">
33         <h4 class="mb-3">{{ $pageTitle }}</h4>
34       </div>
35       <div class="col-lg-3 col-xl-2">
36         <div class="d-grid gap-2">
37           <a href="{{ route('employees.create') }}" class="btn btn-primary">Create Employee</a>
38         </div>
39       </div>
40     </div>
41     <hr>
42     <div class="table-responsive border p-3 rounded-3">
43       <table class="table table-bordered table-hover table-striped mb-0 bg
44         white">
45         <thead>
46           <tr>
47             <th>First Name</th>
48             <th>Last Name</th>
49             <th>Email</th>
50             <th>Age</th>
51             <th>Position</th>
52             <th></th>
53           </tr>
54         </thead>
55         <tbody>
56
57           @foreach ($employees as $employee)
58             <tr>
59               <td>{{ $employee->firstname }}</td>
60               <td>{{ $employee->lastname }}</td>
61               <td>{{ $employee->email }}</td>
62               <td>{{ $employee->age }}</td>
63               <td>{{ $employee->position_name }}</td>
64               <td>
65                 <div class="d-flex">
66                   <a href="{{ route('employees.show', ['employee'
67 => $employee->employee_id]) }}" class="btn btn-outline-dark btn-sm me
68 2"><i class="bi-person-lines-fill"></i></a>
69                   <a href="{{ route('employees.edit', ['employee'
70 => $employee->employee_id]) }}" class="btn btn-outline-dark btn-sm me
71 2"><i class="bi-pencil-square"></i></a>
72                 </div>
73                 <div>
74                   <form action="{{ route('employees.destroy',
75 ['employee' => $employee->employee_id]) }}" method="POST">
76                     @csrf
77                     @method('delete')
78                     <button type="submit" class="btn btn
79 outline-dark btn-sm me-2"><i class="bi-trash"></i></button>
80                   </form>
81                 </div>
82               </td>
83             </tr>
84           </tbody>
85         </table>
86       </div>
87     </div>
88   </div>
89   @vite('resources/js/app.js')
90 </body>
91 </html>

```

- route('home'): mengarahkan pengguna ke halaman beranda
- route('employees.index'): mengarahkan ke halaman daftar karyawan, tautan ini memiliki class active buat menunjukkan halaman saat ini
- route('profile'): mengarahkan ke halaman profil pengguna
- data Dummy: berisi informasi karyawan seperti nama, email, dan umur
- route employees.create: menampilkan formulir buat menambah karyawan
- \$pageTitle mendefinisikan variabel \$pageTitle dgn nilai string 'Home', variabel ini digunakan buat memberikan judul halaman yg akan ditampilkan pada view
- my Profile: menggunakan route route('profile')
- employees.show mengarahkan ke halaman detail karyawan dgn ID tertentu, route: employee.show

bukti:

GET|HEAD	/	.....
GET|HEAD	employees	.....	employees.index > EmployeeController@index
POST	employees	.....	employees.store > EmployeeController@store
GET|HEAD	employees/create	.....	employees.create > EmployeeController@create
GET|HEAD	employees/{employee}	.....	employees.show > EmployeeController@show
PUT|PATCH	employees/{employee}	.....	employees.update > EmployeeController@update
DELETE	employees/{employee}	.....	employees.destroy > EmployeeController@destroy
GET|HEAD	employees/{employee}/edit	.....	employees.edit > EmployeeController@edit
GET|HEAD	home	.....	home > HomeController@index
GET|HEAD	profile	.....	profile > ProfileController
GET|HEAD	storage/{path}	.....	storage.local
GET|HEAD	up	.....

9. Halaman Create employee

```
1 public function create()
2 {
3     $pageTitle = 'Create Employee';
4     // RAW SQL Query
5     $positions = DB::select('select * from positions');
6
7     return view('employee.create', compact('pageTitle', 'positions'));
8 }
```

- function create() mendeklarasikan sebuah metode publik bernama create, fungsi ini biasanya dipanggil saat pengguna mengakses rute yg terkait dgn form pembuatan data baru, misalnya GET /employees/create
- \$pageTitle Variabel \$pageTitle berisi string 'Create Employee', variabel ini digunakan buat memberikan judul pada halaman form pembuatan karyawan

10. Buat file View dengan nama create.blade.php

```
1 <doctype html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>{{ $pageTitle }}</title>
9   @vite('resources/sass/app.scss')
10 </head>
11
12 <body>
13   <nav class="navbar navbar-expand-md navbar-dark bg-primary">
14     <div class="container">
15       <a href="{{ route('home') }}" class="navbar-brand mb-0 h1"><i class="bi-hexagon-fill me-2"></i> Data Master</a>
16       <button type="button" class="navbar-toggler" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent">
17         <span class="navbar-toggler-icon"></span>
18       </button>
19       <div class="collapse navbar-collapse" id="navbarSupportedContent">
20         <hr class="d-lg-none text-white-50">
21         <ul class="navbar-nav flex-row flex-wrap">
22           <li class="nav-item col-2 col-md-auto"><a href="{{ route('home') }}" class="nav-link">Home</a></li>
23           <li class="nav-item col-2 col-md-auto"><a href="{{ route('employees.index') }}" class="nav-link">Employee List</a></li>
24         </ul>
25         <hr class="d-lg-none text-white-50">
26         <a href="{{ route('profile') }}" class="btn btn-outline-light my-2 ms-md-auto"><i
27           class="bi-person-circle me-1"></i> My Profile</a>
28       </div>
29     </div>
30   </nav>
31   <div class="container-sm mt-5">
32     <form action="{{ route('employees.store') }}" method="POST">
33       @csrf
34       <div class="row justify-content-center">
35         <div class="p-5 bg-light rounded-3 border col-xl-6">
36           @if ($errors->any())
37             @foreach ($errors->all() as $error)
38               <div class="alert alert-danger alert-dismissible fade show">
39                 {{ $error }}
40                 <button type="button" class="btn-close" data-bs-dismiss="alert"
41                   aria-label="Close"></button>
42             </div>
43             @endforeach
44           @endif
45           <div class="mb-3 text-center">
46             <i class="bi-person-circle fs-1"></i>
47             <h4>Create Employee</h4>
48           </div>
49           <hr>
50           <div class="row">
51             <div class="col-md-6 mb-3">
52               <label for="firstName" class="form-label">First Name</label>
53               <input class="form-control" type="text" name="firstName" id="firstName" value="" placeholder="Enter First Name">
54             </div>
55             <div class="col-md-6 mb-3">
56               <label for="lastName" class="form-label">Last Name</label>
57               <input class="form-control" type="text" name="lastName" id="lastName" value="" placeholder="Enter Last Name">
58             </div>
59             <div class="col-md-6 mb-3">
60               <label for="email" class="form-label">Email</label>
61               <input class="form-control" type="text" name="email" id="email" value="" placeholder="Enter Email">
62             </div>
63             <div class="col-md-6 mb-3">
64               <label for="age" class="form-label">Age</label>
65               <input class="form-control" type="text" name="age" id="age" value="" placeholder="Enter Age">
66             </div>
67             <div class="col-md-12 mb-3">
68               <label for="position" class="form-label">Position</label>
69               <select name="position" id="position" class="form-select">
70                 @foreach ($positions as $position)
71                   <option value="{{ $position->id }}">{{ $position->name }}</option>
72                 @endforeach
73               </select>
74               @error('position')
75                 <div class="text-danger"><small>{{ $message }}</small></div>
76               @enderror
77             </div>
78           </div>
79           <hr>
80           <div class="row">
81             <div class="col-md-6 d-grid">
82               <a href="{{ route('employees.index') }}" class="btn btn-outline-dark btn-lg mt-3"><i class="bi-arrow-left-circle me-2"></i> Cancel</a>
83             </div>
84             <div class="col-md-6 d-grid">
85               <button type="submit" class="btn btn-dark btn-lg mt-3"><i class="bi-check-circle me-2"></i> Save</button>
86             </div>
87           </div>
88         </div>
89       </form>
90     </div>
91   @vite('resources/js/app.js')
92 </body>
93 </html>
94
95
96
```

digunakan buat menampilkan hal form pembuatan data karyawan di aplikasi berbasis Laravel

```

1 form action="{{ route('employees.store') }}" method="POST">
2     @csrf

```

- buat formulir buat menyimpan data karyawan baru. @csrf, menyertakan token csrf buat melindungi form dari serangan Cross-Site Request Forgery

```

1 @foreach ($errors->all() as $error)
2     <div class="alert alert-danger alert-dismissible fade show">
3         {{ $error }}
4         <button type="button" class="btn-close" data-bs-dismiss="alert"
5             aria-label="Close"></button>
6     </div>
7 @endforeach

```

- ketika validasi data gagal, laravel secara otomatis mengembalikan pesan kesalahan. Pesan ini dapat ditampilkan di view menggunakan direktif blade

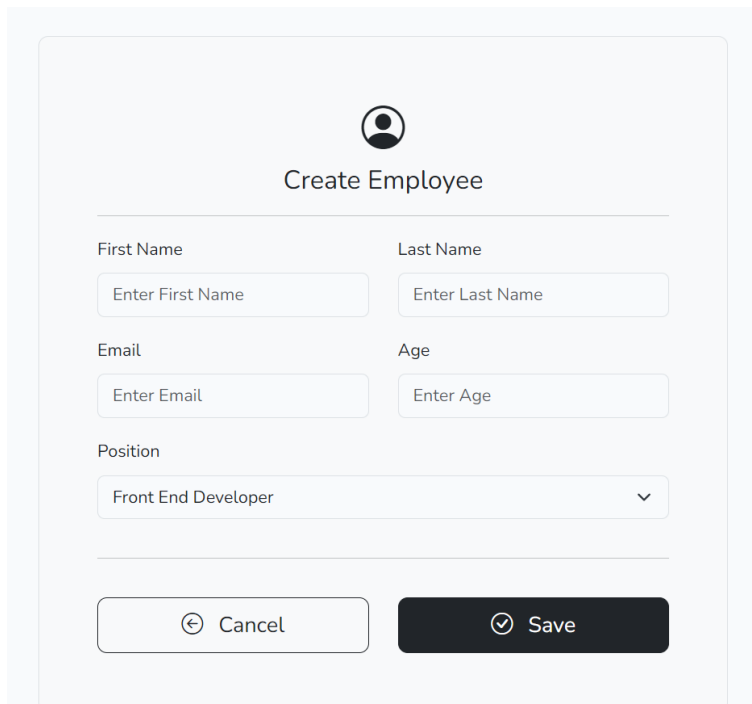
```

1 public function create()
2 {
3     $pageTitle = 'Create Employee';
4     // RAW SQL Query
5     $positions = DB::select('select * from positions');
6
7     return view('employee.create', compact('pageTitle', 'positions'));
8 }
9

```

- data dapat dikirimkan ke view melalui controller, berikut implementasi pengiriman data ke view
- Passing Data to Views: data karyawan berhasil ditampilkan di tabel pada halaman daftar
- CSRF Protection: token CSRF disertakan di setiap form buat mencegah serangan
- Displaying Validation Errors: pesan kesalahan validasi ditampilkan di bawah input yg bermasalah, dgn tampilan Bootstrap

Hasil



A user interface for creating a new employee. At the top is a person icon and the title "Create Employee". Below this are five input fields: "First Name", "Last Name", "Email", "Age", and "Position". The "Position" field is a dropdown menu currently showing "Front End Developer". At the bottom are two buttons: "Cancel" and "Save".

Person icon

Create Employee

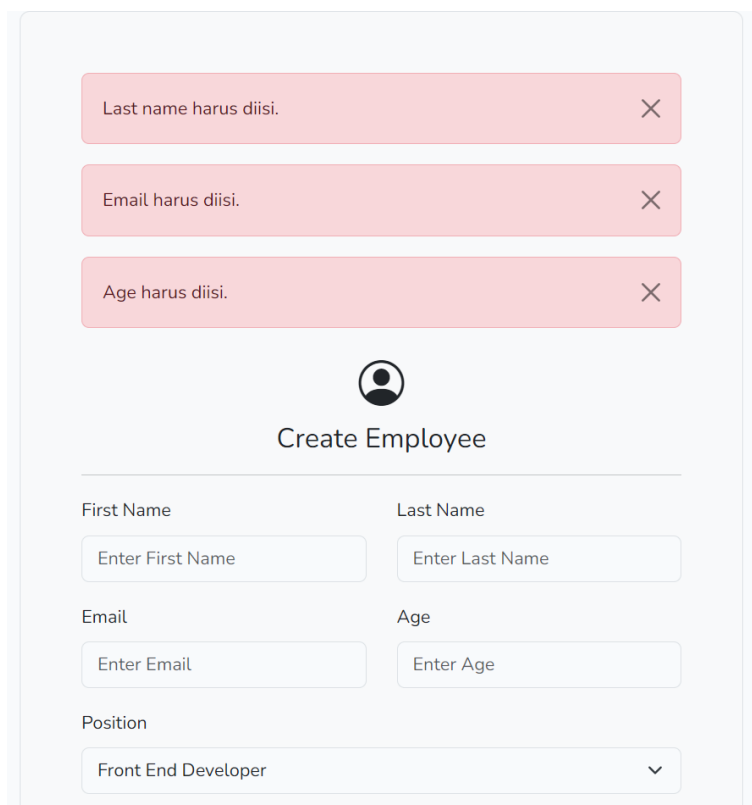
First Name:

Last Name:

Email:

Age:

Position:



The same "Create Employee" form as above, but with three red error messages at the top: "Last name harus diisi.", "Email harus diisi.", and "Age harus diisi.". Each message has a close button (X) on the right.

Last name harus diisi. X

Email harus diisi. X

Age harus diisi. X

Person icon

Create Employee

First Name:

Last Name:

Email:

Age:

Position:

Link github : https://github.com/kylasalsa/modul12_controller.git