Web Engineering Lab (CSE4222)

Objective 1:

1. Clone the Repository
   git clone <project-url>

2. Navigate to the Project Folder
   cd <project-folder>

3. Install PHP Dependencies
   composer install

4. Install Node.js Dependencies
   npm install

5. Set Up Environment Configuration
   cp .env.example .env

   This copies the example environment file (.env.example) to a new .env file, which will store the project's environment-specific settings.

6. Generate Application Key
   php artisan key:generate

   This generates a unique application key and adds it to the .env file. The key is used for encryption and other security-related tasks in Laravel.

7. Create database from laragon and put the database name, username, and password in the env folder like this:
   DB_CONNECTION=mysql
   DB_HOST=127.0.0.1
   DB_PORT=3306
   DB_DATABASE=practice1
   DB_USERNAME=root
   DB_PASSWORD=

8. Run the Migration
   php artisan migrate

9. Start the Development Serve
   php artisan serve

   By default, the project should now be accessible at http://localhost:8000.

Objective 2:

Create branch & switch: git checkout -b branch

1. Generate a Migration with model, controller, factory, and seeder. When you create these together, these are automatically connected.
   php artisan make:model <ModelName> –mcrfs

2. Define the Table Structure
   - Open the generated migration file located in the database/migrations directory.
   - In the up() method, define the columns of the table:
     Schema::create('employees', function (Blueprint $table) {
     ```
             $table->id();
             $table->string('name', 255);
             $table->string('job_title', 100);
             $table->date('joining_date');
             $table->double('salary');
             $table->string('email', 255)->unique()->nullable();
             $table->string('mobile_no')->unique();
             $table->text('address');
             $table->timestamps();
         });
     ```

3. Run the Migration
   php artisan migrate

4. Go to the EmployeeFactory file from database/factories and update the file to generate test data.
   ```
   public function definition(): array
     {
       return [
         'name' => $this->faker->name,
         'job_title' => $this->faker->jobTitle,
         'joining_date' => $this->faker->date,
         'salary' => $this->faker->randomFloat(2,1000,1000),
         'email' => $this->faker->unique()->safeEmail,
         'mobile_no' => $this->faker->unique()->phoneNumber,
         'address' => $this->faker->address,
       ];
     }
   ```

5. Goto EmployeeSeeder file from database/seeders and update the file to run the factory in the seeder
   use App\Models\Employee;

   ```
   public function run(): void
     {
       Employee::factory(1000)->create();
     }
   ```

6. Run the Seeder
   php artisan db:seed --class=<seeder_name> (for Employee model seeder name will be EmployeeSeeder)

   Finally 10 test data will be added to the database.

[
1. php artisan migrate:fresh (if you want to drop the table)
2. php artisan db:seed --class=<seeder_name> (to get the new table content)
]

Objective 3:

>>>----------------------------Start SHOW table sections work------------------------>>>

1. App>Http>EmployeeController এর মাঝে public function index() এর মাঝে লিখতে হবে
=>$employees = Employee::paginate(10);
=>return view('index') -> with('employees', $employees);

2. routes>web.php তে নিচের code লিখতে হবে
=> use App\Http\Controllers\EmployeeController;
=>Route::get('/', [EmployeeController::class, 'index']) -> name('employee.index');

3. resource>views> file create করতে হবে index.blade.php তারপর

=> ! + tab
=>

```html
<body>

   <table border="1" width="500">
     <tr>
       <th>Id</th>
       <th>Name</th>
       <th>Job Title</th>
       <th>Joining Date</th>
       <th>Salary</th>
       <th>Email</th>
       <th>Mobile No</th>
       <th>Address</th>
       <th>Action</th>
     </tr>
     @foreach($employees as $employee)
     <tr>
       <td>{{ $employee->id }}</td>
       <td>{{ $employee->name }}</td>
       <td>{{ $employee->job_title }}</td>
       <td>{{ $employee->joining_date }}</td>
       <td>{{ $employee->salary }}</td>
       <td>{{ $employee->email }}</td>
       <td>{{ $employee->mobile_no }}</td>
       <td>{{ $employee->address }}</td>
       <td></td>
     </tr>
     @endforeach
   </table>
```

```
    {{ $employees->links() }}

</body>
```

4. routes>web.php> add
=>Route::get('/employee/{employee}', [EmployeeController::class, 'show']) -> name('employee.show');
=>resource>views>index.blade.php> add below code into @foreach's last row
<td><a href="{{ route('employees.show', $employee->id)}}"> Details</td>
=> EmployeeController> add following code under show function
//public function show(Employee $id) {
      return 'Showing employee with ID: ' .$id;
  //}
=> resource>views> file create "show.blade.php" then add
=> ! + tab
=>

```
<body>
    <a href="{{ route('employees.index') }}">Back</a>
    <h1>Hello from show.blade.php</h1>

    <p> Showing employee id {{ $id }} </p>
</body>
```

=> app>Http>EmployeeController> under "show function" add this

```
public function show($id)
    {
        $employee= Employee::find($id);

        return view('show')
             -> with('employee', $employee);

    }
```
=> resource>views> file create "show.blade.php" then add
```
<body>
    <a href="{{ route('employees.index') }}" class="btn btn-primary">Back</a>
    <h1>Hello from show.blade.php</h1>

    <table border="1" width="500">
        <tr>
          <th>Id</th>
          <td>{{ $employee->id }}</td>
        </tr>
        <tr>
          <th>Name</th>
          <td>{{ $employee->name }}</td>
        </tr>
        <tr>
          <th>Job Title</th>
          <td>{{ $employee->job_title }}</td>
        </tr>
        <tr>
          <th>Joining Date</th>
          <td>{{ $employee->joining_date }}</td>
```

```
      </tr>
      <tr>
        <th>Salary</th>
        <td>{{ $employee->salary }}</td>
      </tr>
      <tr>
        <th>Email</th>
        <td>{{ $employee->email }}</td>
      </tr>
      <tr>
        <th>Mobile No</th>
        <td>{{ $employee->mobile_no }}</td>
      </tr>
      <tr>
        <th>Address</th>
        <td>{{ $employee->address }}</td>
      </tr>

</body>
```

5. Search bootstrap on chrome> click Read the docs> copy 2nd code and paste on index.blade.php
Then copy then body contents to the bootstrap code and delete previous html code.

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap demo</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet"
integrity="sha384-QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH"
crossorigin="anonymous">
  </head>
  <body>
  <h1>Employee List</h1>
  <table class="table table-striped">
      <tr>
        <th>Id</th>
        <th>Name</th>
        <th>Job Title</th>
        <th>Joining Date</th>
        <th>Salary</th>
        <th>Email</th>
        <th>Mobile No</th>
        <th>Address</th>
        <th>Action</th>
      </tr>
      @foreach($employees as $employee)
      <tr>
        <td>{{ $employee->id }}</td>
        <td>{{ $employee->name }}</td>
        <td>{{ $employee->job_title }}</td>
        <td>{{ $employee->joining_date }}</td>
        <td>{{ $employee->salary }}</td>
        <td>{{ $employee->email }}</td>
        <td>{{ $employee->mobile_no }}</td>
        <td>{{ $employee->address }}</td>
        <td><a href="{{ route('employees.show', $employee->id)}}"> Details</td>
      </tr>
```

```
        @endforeach
    </table>

    {{ $employees->links() }}

 </body>
 </html>
```

=>Change the table class to <table class="table table-striped"> using bootstrap.

6. app>Providers>AppServiceProvider.php>then add
=>use Illuminate\Pagination\Paginator;
=>undr boot function write

```
public function boot(): void
    {
        Paginator::useBootstrapFive();
    }
```


7. resource>views> create file "layout.blade.php"

8. Bootstrap>Examples> CDN starter> Open in stackblitz > copy the whole code then paste in
layout.blade.php > edit last div like below and delete its content

```
<div class="container my-5">
    @yield('page-content')
    </div>
```

=> delete unnecessary links in navbar like search and other things.

9. resource>views>index.blade.php> add following
=> @extends('layout')
=>@section('page-content')
=>Body content without </body> title
=>@endsection
=>And delete before <body> and after </body. (including these headings)

```
@extends('layout')

@section('page-content')

  <h1>Employee List</h1>
    <table class="table table-striped">
      <tr>
        <th>Id</th>
        <th>Name</th>
        <th>Job Title</th>
        <th>Joining Date</th>
        <th>Salary</th>
        <th>Email</th>
        <th>Mobile No</th>
        <th>Address</th>
        <th>Action</th>
      </tr>
      @foreach($employees as $employee)
      <tr>
        <td>{{ $employee->id }}</td>
        <td>{{ $employee->name }}</td>
```

```
            <td>{{ $employee->job_title }}</td>
            <td>{{ $employee->joining_date }}</td>
            <td>{{ $employee->salary }}</td>
            <td>{{ $employee->email }}</td>
            <td>{{ $employee->mobile_no }}</td>
            <td>{{ $employee->address }}</td>
            <td><a href="{{ route('employees.show', $employee->id)}}"> Details</td>
        </tr>
        @endforeach
    </table>

    {{ $employees->links() }}

@endsection
```

10. Add same things in show.blade.php and change the table class like index.blade.php's table class from bootstrap

>>>-----------------------------End SHOW table sections work------------------------>>>

>>>-----------------------------Start add new item (INSERT) section work---------------------->>>

11. resource>views>index.blade.php> add following on top to add inset employee button (top of the table)

```
<p class="text-end">
      <a href="" class="btn btn-primary">Add Employee</a>
    </p>
```

12. resource>views>create file "create.blade.php" then add following
=>@extends('layout')
=>@section('page-content')
=> content for form
=>@endsection

13. routes>web.php then add
=> Route::get('/employees/create', [EmployeeController::class, 'create']) -> name('employees.create');

14. resource>views>index.blade.php> add

```
<a href="{{ route('employees.index') }}" class="btn btn-primary">Back</a>

<legend>New Employee</legend>
```

15. app>Http>EmployeeController add following in create function

```
public function create()
    {
        return view('create');
    }
```

16. Go to step 14 and add a form from bootstrap (first form (disable er oporer ta)), then add

```
<form action="{{route('employees.store')}}" method="POST">
@csrf
  <div class="mb-2">
    <label for="name" class="form-label">Name</label>
```

```
      <input type="text" class="form-control" id="name">
    </div>
    <div class="mb-2">
      <label for="job_title" class="form-label">Job Title</label>
      <input type="text" class="form-control" id="job_title">
    </div>
    <div class="mb-2">
      <label for="joining_date" class="form-label">Joining Date</label>
      <input type="date" class="form-control" id="joining_date">
    </div>
    <div class="mb-2">
      <label for="salary" class="form-label">Salary</label>
      <input type="number" class="form-control" id="salary">
    </div>
    <div class="mb-2">
      <label for="email">email</label>
        <input type="email" id="email" class="form-control" >
    </div>
    <div class="mb-2">
      <label for="mobile_no" class="form-label">Mobile No</label>
      <input type="number" class="form-control" id="mobile_no">
    </div><div class="mb-2">
      <label for="address" class="form-label">Address</label>
      <input type="text" class="form-control" id="address">
    </div>

    <button type="submit" class="btn btn-primary">Submit</button>
  </form>
```

=> add form action <form action="{{route('employees.store')}}" method="POST">
=>add "@csrf" below form action line

17. routes>web.php> add
=> Route::post('/employees/store', [EmployeeController::class, 'store']) -> name('employees.store');

18. app>Http> EmployeeController>add code to store function

```
public function store(Request $request)
    {
       $request->validate([
          'name' => 'required|string|max:255',
          'job_title' => 'required|string|max:255',
          'joining_date' => 'required|date',
          'salary' => 'required|numeric',
          'email' => 'required|email|unique:employees,email',
          'mobile_no' => 'required|max:20',
          'address' => 'required|string|max:255',
       ]);

       $employee = Employee::create($request->all());
       $employee->save();

       return redirect() -> route('employees.show', $employee->id);
    }
```

19. app>Models>Employee.php then add to model class
=>protected $fillable= ['name', 'job_title','joining_date', 'salary', 'email', 'mobile_no', 'address'];

20.resource>views>create.blade.php > now add validation to each field

```
<form action="{{route('employees.store')}}" method="POST">
@csrf
<div class="mb-2">
   <label for="name" class="form-label">Name</label>
   <input type="text" name="name" class="form-control" id="name" value="{{old('name')}}">
   <div>{{ $errors->first('name') }}</div>
  </div>
  <div class="mb-2">
   <label for="job_title" class="form-label">Job Title</label>
   <input type="text" name="job_title" class="form-control" id="job_title" value="{{old('job_title')}}">
   <div>{{ $errors->first('job_title') }}</div>
  </div>
  <div class="mb-2">
   <label for="joining_date" class="form-label">Joining Date</label>
   <input type="date" name="joining_date" class="form-control" id="joining_date"
value="{{old('joining_date')}}">
   <!-- <div class="invalid-feedbacks">{{ $errors->first('joining_date') }} -->
</div>
  <div class="mb-2">
   <label for="salary" class="form-label">Salary</label>
   <input type="number" name="salary" class="form-control" id="salary" value="{{old('salary')}}">
   <div class="invalid-feedbacks">{{ $errors->first('salary') }}</div>
  </div>
  <div class="mb-2">
      <label for="email">email</label>
      <input type="email" name="email" id="email" class="form-control" value="{{old('email')}}" >
      <div class="invalid-feedbacks">{{$errors->first('email')}}</div>
   </div>
  <div class="mb-2">
   <label for="mobile_no" class="form-label">Mobile No</label>
   <input type="number" name="mobile_no" class="form-control" id="mobile_no"
value="{{old('mobile_no')}}">
   <div class="invalid-feedbacks">{{ $errors->first('mobile_no') }}
</div><div class="mb-2">
   <label for="address" class="form-label">Address</label>
   <input type="text" name="address" class="form-control" id="address" value="{{old('address')}}">
   <div class="invalid-feedbacks">{{ $errors->first('address') }}
  </div>

  <div class="mb-2">
   <button type="submit" class="btn btn-primary">Submit</button>
  </div>
</form>
```

>>>----------------------End INSERT ---------------------<<<
>>>----------------------Start DELETE ---------------------<<<

21. routes>web.php>
=> Route::delete('/employees/{id}/delete', [EmployeeController::class, 'destroy']) ->
name('employees.destroy');

22. .resource>views>index.blade.php > add delete button and form below show button and inside <td>
</td>

```
      <td class="d-flex justify-content-center">
          <a href="{{ route('employees.show', $employee->id)}}" class="btn btn-success ms-1"> Show
</a>
          <form method="POST" action="{{ route('employees.destroy', $employee->id) }}"
```

```
onsubmit="return confirm('Are you sure?')">
            @csrf
            @method('DELETE')
            <button type="submit" class="btn btn-danger ms-1">Delete</button>
        </form>
    </td>
```

23. app>Http>EmployeeController> destroy function

```
public function destroy(Request $request, $id)
  {
    $employee = Employee::find($id);
    $employee->delete();

    return redirect() -> route('employees.index');
  }
```

>>>----------------------End DELETE ---------------------<<<

NB: Search, Update not done 😴