

LAPORAN TUGAS AKHIR
PEMROGRAMAN FRAMEWORK



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Praktik Study Kasus Perpustakaan STMIK Palangkaraya dengan Fitur Tambahan :

1. Crud Tabel Buku
2. Fasilitas Peminjaman dan Pengembalian Buku
3. Memodifikasi Tampilan Front End untuk menampilkan daftar koleksi buku

Crud Tabel Buku

1. Buat Table Buku

Buat table buku dengan cara ketik command berikut pada terminal VScode:

```
PS C:\xampp\htdocs\perpustakaan> php spark migrate:create buku
```

Lalu akan terbuat sebuah file didalam folder app/Database/Migrations, nama file tersebut akan diakhiri dengan nama Buku, buka file tersebut, dan isi dengan codenya seperti berikut ini :

```
<?php

namespace App\Database\Migrations;

use CodeIgniter\Database\Migration;

class Buku extends Migration
{
    public function up()
    {
        $this->forge->addField([
            'kode' => [
                'type' => 'VARCHAR',
                'constraint' => 11,
            ],
            'judul' => [
                'type' => 'VARCHAR',
                'constraint' => '255',
            ],
            'slug' => [
```

```

        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'penulis' => [
        'type' => 'VARCHAR',
        'constraint' => "255",
    ],
    'bahasa' => [
        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'penerbit' => [
        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'tanggal_terbit' => [
        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'jenis_media' => [
        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'halaman' => [
        'type' => 'VARCHAR',
        'constraint' => '255',
    ],
    'sampul' => [
        'type' => 'VARCHAR',
        'constraint' => '500',
    ],
    'created_at' => [
        'type' => 'DATETIME',
        'null' => true,
    ],
    'updated_at' => [
        'type' => 'DATETIME',
        'null' => true,
    ]
]);
$this->forge->addPrimaryKey('kode');
$this->forge->createTable('buku');
}
//-----
-----

```

```

public function down()
{
    $this->forge->dropTable('buku');
}
}

```

Berikutnya kita akan menjalankan file migration untuk membuat tabel didatabase, masuk ke project codeigniter melalui terminal, lalu jalankan perintah :

```
PS C:\xampp\htdocs\perpustakaan> php spark migrate
```

Cek database pada phpmyadmin untuk melihat struktur table yang telah dibuat melalui fitur migration yang ada pada codeigniter 4

Server: 127.0.0.1 » Database: ci4app » Table: buku									
Table structure									
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	kode	varchar(11)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 2	judul	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 3	slug	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 4	penulis	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 5	bahasa	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 6	penerbit	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 7	tanggal_terbit	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 8	jenis_media	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 9	halaman	varchar(255)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 10	sampul	varchar(500)	utf8_general_ci		No	None			Change
<input type="checkbox"/> 11	created_at	datetime			Yes	NULL			Change
<input type="checkbox"/> 12	updated_at	datetime			Yes	NULL			Change

2. Insert Dummy Data

Membuat Insert Dummy Data menggunakan Seeding yang telah disediakan oleh Codeigniter 4.

Masuk kedalam project codeigniter 4, melalui terminal, lalu jalankan perintah dibawah ini :

```
PS C:\xampp\htdocs\perpustakaan> php spark make:seeder BukuSeeder
```

lalu tekan enter, jika berhasil maka akan terbuat sebuah file dengan nama **BukuSeeder.php** didalam folder **app\Database\Seeds** buka file tersebut, lalu tuliskan code didalam file **BukuSeeder.php**

```
<?php

namespace App\Database\Seeds;

use CodeIgniter\Database\Seeder;
use CodeIgniter\I18n\Time;

class BukuSeeder extends Seeder
{
    public function run()
    {
        $data = [
            [
                'kode' => 'A01',
                'judul' => 'Matematika',
                'slug' => 'matematika',
                'penulis' => 'Alex Gilbert',
                'bahasa' => 'Indonesia',
                'penerbit' => 'Gramedia',
                'tanggal_terbit' => '2017',
                'jenis_media' => 'Cetak',
                'halaman' => '750 total',
                'created_at' => Time::now()
            ],
            [
                'kode' => 'A02',
```

```

        'judul' => 'Fisika',
        'slug' => 'fisika',
        'penulis' => 'July Anggara',
        'bahasa' => 'Indonesia',
        'penerbit' => 'Gramedia',
        'tanggal_terbit' => '2015',
        'jenis_media' => 'Cetak',
        'halaman' => '1200 total',
        'created_at' => Time::now()
    ],
];
$this->db->table('buku')->insertBatch($data);
}
}

```

jalankan perintah diatas untuk insert data buku tersebut ke dalam tabel buku, silahkan masuk ke folder project codeigniter melalui terminal, lalu jalankan perintah sebagai berikut ini :

```
PS C:\xampp\htdocs\perpustakaan> php spark db:seed BukuSeeder
```

3. Model Buku

Buat file model dengan nama BukuModel.php, simpan file tersebut didalam folder app/Models

lalu isi file BukuModel.php dengan code sebagai berikut :

```

<?php

namespace App\Models;

use CodeIgniter\Model;

class BukuModel extends Model
{
    protected $table = "buku";
    protected $primaryKey = "kode";
    protected $returnType = "object";
    protected $useTimestamps = true;
}

```



```

        protected $allowedFields = [
            'kode', 'judul', 'slug', 'penulis', 'bahasa',
            'penerbit', 'tanggal_terbit', 'jenis_media', 'halaman',
            'sampul'
        ];
    }

```

4. Controller Buku

Sebuah controller dengan nama file Buku.php didalam folder app/Controllers, dan isi dengan code seperti berikut ini :

```

<?php

namespace App\Controllers;

use App\Models\BukuModel;

class Buku extends BaseController
{
    protected $buku;

    function __construct()
    {
        $this->buku = new BukuModel();
    }

    public function index()
    {
        $data['pageTitle'] = 'DAFTAR BUKU';
        $data['buku'] = $this->buku->findAll();
        return view('dashboard/buku', $data);
    }

    public function view($kode)
    {
        $dataBuku = $this->buku->find($kode);
        if (empty($dataBuku)) {
            throw new
\CodeIgniter\Exceptions\PageNotFoundException('Data Buku Tidak
ditemukan !');
        }
        $data['pageTitle'] = 'Data Buku';
    }
}

```

```

        $data['buku'] = $dataBuku;
        return view('dashboard/buku_view', $data);
    }

    function edit($kode)
    {
        $dataBuku = $this->buku->find($kode);
        if (empty($dataBuku)) {
            throw new
\CodeIgniter\Exceptions\PageNotFoundException('Data Buku Tidak
ditemukan !');
        }
        $data['pageTitle'] = 'Edit Data Buku';
        $data['buku'] = $dataBuku;
        return view('dashboard/buku_edit', $data);
    }

    function delete($kode)
    {
        $dataBuku = $this->buku->find($kode);
        if (empty($dataBuku)) {
            throw new
\CodeIgniter\Exceptions\PageNotFoundException('Data Buku Tidak
ditemukan !');
        }
        $this->buku->delete($kode);
        //hapus file image dari folder public
        $filesampul = $dataBuku->sampul;
        $path = '../public/img/sampul/';
        @unlink($path . $filesampul);

        session()->setFlashdata('message', 'Delete Data Buku
Berhasil');
        return redirect()->to('/buku');
    }

    public function create()
    {
        $data['pageTitle'] = 'Input Data Buku';
        return view('dashboard/buku_create', $data);
    }
    public function store()
    {

```

```

if (!$this->validate([
    'kode' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'judul' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'slug' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'penulis' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'bahasa' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'penerbit' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'tanggal_terbit' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'jenis_media' => [
        'rules' => 'required',

```

```

        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'halaman' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'sampul' => [
        'rules' =>
'uploaded[sampul]|mime_in[sampul,image/jpg,image/jpeg,image/gif,image/
png]|max_size[sampul,1024]',
        'errors' => [
            'uploaded' => 'Harus Ada File yang diupload',
            'mime_in' => 'File Extention Harus Berupa
jpg,jpeg,gif,png',
            'max_size' => 'Ukuran File Maksimal 1 MB'
        ]
    ],
    )) {
        session()->setFlashdata('error', $this->validator-
>listErrors());
        return redirect()->back()->withInput();
    }
    $filesampul = $this->request->getFile('sampul');
    $namaFilesampul = $filesampul->getRandomName();
    $filesampul->move('img/sampul', $namaFilesampul);
    $this->buku->insert([
        'kode' => $this->request->getVar('kode'),
        'judul' => $this->request->getVar('judul'),
        'slug' => $this->request->getVar('slug'),
        'penulis' => $this->request->getVar('penulis'),
        'bahasa' => $this->request->getVar('bahasa'),
        'penerbit' => $this->request->getVar('penerbit'),
        'tanggal_terbit' => $this->request-
>getVar('tanggal_terbit'),
        'jenis_media' => $this->request->getVar('jenis_media'),
        'halaman' => $this->request->getVar('halaman'),
        'sampul' => $namaFilesampul
    ]);
    session()->setFlashdata('message', 'Tambah Data Buku
Berhasil');

```

```

        return redirect()->to('/buku');
    }
    public function update($kode)
    {
        if (!$this->validate([
            'judul' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'slug' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'penulis' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'bahasa' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'penerbit' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'tanggal_terbit' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ],
            'jenis_media' => [
                'rules' => 'required',
                'errors' => [
                    'required' => '{field} Harus diisi'
                ]
            ]
        ]))
    }

```

```

        ], 'halaman' => [
            'rules' => 'required',
            'errors' => [
                'required' => '{field} Harus diisi'
            ]
        ],
        'sampul' => [
            'rules' =>
'uploaded[sampul]|mime_in[sampul,image/jpg,image/jpeg,image/gif,image/
e/png]|max_size[sampul,1024]',
            'errors' => [
                'uploaded' => 'Harus Ada File yang diupload',
                'mime_in' => 'File Extention Harus Berupa
jpg,jpeg,gif,png',
                'max_size' => 'Ukuran File Maksimal 1 MB'
            ]
        ],
    ])) {
        session()->setFlashdata('error', $this->validator-
>listErrors());
        return redirect()->back()->withInput();
    }
    //ambil nama sampullama dari variabel tipe hidden
    $filesampullama = $this->request->getVar('sampullama');
    //cek data file foto
    $filesampul = $this->request->getFile('sampul');
    //jika file kosong jalankan perintah mengambil data nama
file lama
    if ($filesampul->getError() == 4) {
        $namaFilesampul = $this->request->getVar('sampullama');
    } else {
        // jika tidak hapus file sampul lama dan ambil data file
sampul baru
        $path = '../public/img/sampul/';
        @unlink($path . $filesampullama);
        //generate nama file random
        $namaFilesampul = $filesampul->getRandomName();
        //pindahkan gambar
        $filesampul->move('img/sampul', $namaFilesampul);
    }
    $this->buku->update($kode, [
        'judul' => $this->request->getVar('judul'),
        'slug' => $this->request->getVar('slug'),
        'penulis' => $this->request->getVar('penulis'),
    ]

```

```

        'bahasa' => $this->request->getVar('bahasa'),
        'penerbit' => $this->request->getVar('penerbit'),
        'tanggal_terbit' => $this->request->getVar('tanggal_terbit'),
        'jenis_media' => $this->request->getVar('jenis_media'),
        'halaman' => $this->request->getVar('halaman'),
        'sampul' => $namaFilesampul
    ]);
    session()->setFlashdata('message', 'Tambah Data Buku Berhasil');
    return redirect()->to('/buku');
}
}

```

Kemudian edit kembali file routes.php yang ada pada folder apps/config/routes.php dengan menambahkan :

```

//Routes Buku//
$routes->get('/buku', 'Buku::index');
$routes->get('/buku/create', 'Buku::create');
$routes->get('/buku/edit', 'Buku::edit');
$routes->get('/buku/store', 'Buku::store');

```

5. Halaman View Buku

Membuat Halaman View buku.php pada folder **app/views/dashboard/**

```

<?= $this->extend('layout/dashboard-layout'); ?>

<?= $this->section('content'); ?>

<link rel="stylesheet" href="/css/style.css">

<div class="card-body">
    <?php if (!empty(session()->getFlashdata('message'))): ?>
        <div class="alert alert-success alert-dismissible fade show"
        role="alert">
            <?php echo session()->getFlashdata('message'); ?>
            <button type="button" class="close" data-dismiss="alert"
            aria-label="Close">
                <span aria-hidden="true">&times;</span>

```

```

        </button>
    </div>
<?php endif; ?>

<div class="col">
    <table class="table table-bordered">
        <a title="Tambah Daftar Buku" href="<?=
base_url('/buku/create'); ?>" class="fas fa-book fa-2x"
style="color:green"> +</a>
        <p></p>
        <thead>
            <tr>
                <th scope="col">Kode</th>
                <th scope="col">Sampul</th>
                <th scope="col">Judul</th>
                <th scope="col">Action</th>
                <th scope="col">Peminjaman</th>
            </tr>
        </thead>
        <tbody>
            <?php
            foreach ($buku as $row) {
                ?>
                <tr>
                    <td><?= $row->kode; ?></td>
                    <div class="text-center">
                        <td></td>
                    </div>
                    <td><?= $row->judul; ?></td>
                    <td>
                        <a title="View" href="<?=
base_url("buku/view/$row->kode"); ?>" class="btn btn-info far fa-
address-book"></a>
                        <a title="Edit" href="<?=
base_url("buku/edit/$row->kode"); ?>" class="btn btn-success fas fa-
edit"></a>
                        <p></p>
                        <a title="Delete" href="<?=
base_url("buku/delete/$row->kode") ?>" class="btn btn-danger far fa-
trash-alt" onclick="return confirm('Apakah Anda yakin ingin
menghapus data ?')"></a>
                    </td>
                    <td>

```



```

                <a title="Pinjam Buku" href="{<?=
base_url('/peminjaman/create/'); ?>" class="fas fa-book-reader fa-
3x" style="color:limegreen"></a>
            </td>
        </tr>
    </tbody>
    <?php
    }
    ?>
</table>
</div>
</div>
</div>
<?= $this->endSection('content'); ?>

```

- Tampilan Halaman Buku

Kode	Sampul	Judul	Action	Peminjaman
A01		Matematika Dasar		
A02		Fisika		
A03		Pemrograman Web		
A04		Kalkulus		

6. Fitur Create Buku

Buat Form Input Data pada folder `app/views/dashboard/buku_create.php` untuk isi kode program seperti di bawah ini :

buku_create.php

```

<?= $this->extend('layout/dashboard-layout'); ?>
<?= $this->section('content'); ?>

```

```

<div class="col-md-10">
    <!-- general form elements -->
    <div class="card card-primary">
        <div class="card-header">
            <h3 class="card-title">Tambah Data Buku</h3>
        </div>
        <!-- /.card-header -->
        <!-- form start -->
        <?php if (!empty(session()->getFlashdata('error'))): ?>
            <div class="alert alert-light alert-dismissible fade
show" role="alert">
                <h4 class="alert-heading">Periksa Entrian Form</h4>
                </hr />
                <?php echo session()->getFlashdata('error'); ?>
                <button type="button" class="close" data-
dismiss="alert" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
        <?php endif; ?>
        <form class="form-horizontal" method="post" action="<?=
base_url('buku/store') ?>" enctype="multipart/form-data">
            <?= csrf_field(); ?>
            <div class="card-body">
                <div class="form-group row">
                    <label for="nim" class="col-sm-2 col-form-
label">Kode</label>
                    <div class="col-sm-6">
                        <input type="text" class="form-control"
id="kode" name="kode" placeholder="kode" value="<?= old('kode');
?>">
                    </div>
                </div>

                <div class="form-group row">
                    <label for="nama" class="col-sm-2 col-form-
label">Judul</label>
                    <div class="col-sm-6">
                        <input type="text" class="form-control"
id="judul" name="judul" value="<?= old('judul'); ?>">
                    </div>
                </div>

                <div class="form-group row">

```

```

        <label for="jurusan" class="col-sm-2 col-form-
label">Slug</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="slug" name="slug" value="<? = old('slug'); ?>">
        </div>
    </div>

    <div class="form-group row">
        <label for="jenis_kelamin" class="col-sm-2 col-
form-label">Penulis</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="penulis" name="penulis" value="<? = old('penulis'); ?>">
        </div>
    </div>

    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Bahasa</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="bahasa" name="bahasa" value="<? = old('bahasa'); ?>">
        </div>
    </div>

    <div class="form-group row">
        <label for="no_telp" class="col-sm-2 col-form-
label">Penerbit</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="penerbit" name="penerbit" value="<? = old('penerbit') ?>" />
        </div>
    </div>

    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Tanggal Terbit</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="tanggal_terbit" name="tanggal_terbit" value="<? =
old('tanggal_terbit'); ?>">
        </div>
    </div>

```

```

        <div class="form-group row">
            <label for="jurusan" class="col-sm-2 col-form-
label">Jenis Media</label>
            <div class="col-sm-6">
                <input type="text" class="form-control"
id="jenis_media" name="jenis_media" value="<?= old('jenis_media');
?>">
            </div>
        </div>

        <div class="form-group row">
            <label for="jurusan" class="col-sm-2 col-form-
label">Halaman</label>
            <div class="col-sm-6">
                <input type="text" class="form-control"
id="halaman" name="halaman" value="<?= old('halaman'); ?>">
            </div>
        </div>

        <div class="form-group row">
            <label for="foto" class="col-sm-2 col-form-
label">Foto Sampul</label>
            <div class="custom-file col-sm-6">
                <input type="file" class="custom-file-input"
id="sampul" name="sampul">
                <label class="custom-file-label"
for="sampul">Pilih Foto Sampul</label>
            </div>
        </div>
    </div>
</div>
<!-- /.card-body -->
<div class="card-footer">
    <button type="submit" class="btn btn-primary">Simpan</button>
</div>
<!-- /.card-footer -->
</form>
</div>
<!-- /.card -->
</div>
<?= $this->endSection('content'); ?>

```

- Tampilan Create Buku/Tambah Buku

Input Data Buku

Tambah Data Buku

Kode: A06

Judul: Basis Data

Slug: basis-data

Penulis: Fathansyah

Bahasa: Indonesia

Penerbit: Informatika

Tanggal Terbit: 2018

Jenis Media: Cetak

Halaman: 538

Foto Sampul: Basisdata.jpg [Browse](#)

[Simpan](#)

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DAFTAR BUKU

Tambah Data Buku Berhasil

Kode	Sampul	Judul	Action	Peminjaman
A01		Matematika Dasar	Edit Hapus	Pinjam
A02		Fisika	Edit Hapus	Pinjam
A03		Pemrograman Web	Edit Hapus	Pinjam
A04		Kalkulus	Edit Hapus	Pinjam

7. Fitur Edit Buku

Buat Form Input Data pada folder `app/views/dashboard/buku_create.php` untuk isi kode program seperti di bawah ini :

buku_edit.php

```
<?= $this->extend('layout/dashboard-layout'); ?>
<?= $this->section('content'); ?>

<link rel="stylesheet" href="/css/style.css">
<div class="col-md-10">
    <!-- general form elements -->
    <div class="card card-primary">
        <div class="card-header">
            <h3 class="card-title">Edit Data Buku</h3>
        </div>
        <!-- /.card-header -->
        <!-- form start -->
        <?php if (!empty(session()->getFlashdata('error'))): ?>
            <div class="alert alert-light alert-dismissible fade
show" role="alert">
                <h4 class="alert-heading">Periksa Entrian Form</h4>
                </hr />
                <?php echo session()->getFlashdata('error'); ?>
                <button type="button" class="close" data-
dismiss="alert" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
        <?php endif; ?>
        <form class="form-horizontal" method="post" action="<?=
base_url('buku/update/' . $buku->kode) ?>" enctype="multipart/form-
data">
            <?= csrf_field(); ?>
            <div class="card-body">
                <div class="form-group row">
                    <label for="nama" class="col-sm-2 col-form-
label">Judul</label>
                    <div class="col-sm-6">
                        <input type="text" class="form-control"
id="judul" name="judul" value="<?= $buku->judul; ?>">
                    </div>
                </div>
                <div class="form-group row">
```

```

        <label for="jurusan" class="col-sm-2 col-form-
label">Slug</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="slug" name="slug" value="<?= $buku->slug; ?>">
        </div>
    </div>
    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Penulis</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="penulis" name="penulis" value="<?= $buku->penulis; ?>">
        </div>
    </div>
    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Bahasa</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="bahasa" name="bahasa" value="<?= $buku->bahasa; ?>">
        </div>
    </div>
    <div class="form-group row">
        <label for="no_telp" class="col-sm-2 col-form-
label">Penerbit</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="penerbit" name="penerbit" value="<?= $buku->penerbit; ?>" />
        </div>
    </div>
    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Tanggal Terbit</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="tanggal_terbit" name="tanggal_terbit" value="<?= $buku-
>tanggal_terbit; ?>">
        </div>
    </div>
    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-
label">Jenis Media</label>
        <div class="col-sm-6">

```

```

        <input type="text" class="form-control"
id="jenis_media" name="jenis_media" value="<?=$buku->jenis_media;
?>">
    </div>
</div>
<div class="form-group row">
    <label for="jurusan" class="col-sm-2 col-form-
label">Halaman</label>
    <div class="col-sm-6">
        <input type="text" class="form-control"
id="halaman" name="halaman" value="<?=$buku->halaman; ?>">
    </div>
</div>
</div>

<div class="form-group row">
    <input type="hidden" id="sampullama"
name="sampullama" value="<?=$buku->sampul; ?>">
    <label for="foto" class="col-sm-2 col-form-
label">&ensp;&ensp;Foto Sampul</label>
    <div class="custom-file col-sm-6">
        <input type="file" class="custom-file-input"
id="sampul" name="sampul">
        <label class="custom-file-label"
for="sampul"><?=$buku->sampul; ?></label>
    </div>
    <?php if (!empty($buku->sampul)) : ?>
        <div class="card-body box-profile col-sm-6">
            <div class="text-center">
                
            </div>
        </div>
    <?php endif; ?>
</div>
<!-- /.card-body -->
<div class="card-footer">
    <button type="submit" class="btn btn-
primary">Simpan</button>
</div>
<!-- /.card-footer -->
</form>
</div>
<!-- /.card -->
</div>

```



```
<?= $this->endSection('content'); ?>
```

- Tampilan Edit Buku

The screenshot shows a web browser window with the URL 'localhost:8080/buku/edit/AD5'. The page title is 'Edit Data Buku'. The form has a blue header bar with the title 'Edit Data Buku'. The form fields are as follows:

Field	Value
Judul	Framework Codeigniter
Slug	framework-ci
Penulis	Budi Raharjo
Bahasa	Indonesia
Penerbit	Informatika : Bandung
Tanggal Terbit	2015
Jenis Media	Cetak
Halaman	570
Foto Sampul	1641395421_a57f609de2ba61fe5bef.jpg

Below the 'Foto Sampul' field, there is a small image of a book cover with the title 'CODEIGNITER'. At the bottom left of the form, there is a blue button labeled 'Simpan'. At the bottom of the page, there is a copyright notice: 'Copyright © 2022 STMIK PALANGKARAYA'.

8. Fitur View Detail Buku

Membuat halaman views buku_view.php seperti kode dibawah ini :

buku_view.php

```
<?= $this->extend('layout/dashboard-layout'); ?>
<?= $this->section('content'); ?>

<link rel="stylesheet" href="/css/style.css">
<div class="col-md-12">
    <!-- general form elements -->
    <section class="content">
        <div class="container-fluid">
            <div class="row">
                <!-- /.card-header -->
                <!-- form start -->
```

```

        <div class="col-md-3">
            <!-- Profile Image -->
            <div class="card card-primary card-outline">
                <div class="card-body box-profile">
                    <div class="text-center">
                        
                    </div>
                    <h3 class="profile-username text-
center"><?= $buku->judul; ?></h3>
                    <p class="text-muted text-center"><?=
$buku->kode; ?><br>
                </div>
            <!-- /.card-body -->
        </div>
        <!-- /.card -->
    </div>
    <div class="col-md-9">
        <div class="card card-primary">
            <div class="card-header">
                <h3 class="card-title">Tentang Buku</h3>
            </div>
            <!-- /.card-header -->
            <div class="card-body">
                <strong><i class="fas fa-book mr-1"></i>
Slug</strong>

                <p class="text-muted">
                    <?= $buku->slug; ?>
                </p>
                <hr>
                <strong><i class="fas fa-edit"></i>
Penulis</strong>

                <p class="text-muted"><?= $buku-
>penulis; ?></p>

                <hr>
                <strong><i class="fas fa-language fa-
lg"></i> Bahasa</strong>

                <p class="text-muted"><?= $buku->bahasa;
?></p>

                <hr>
                <strong><i class="fas fa-building"></i>
Penerbit</strong>

                <p class="text-muted"><?= $buku-
>penerbit; ?></p>

                <hr>

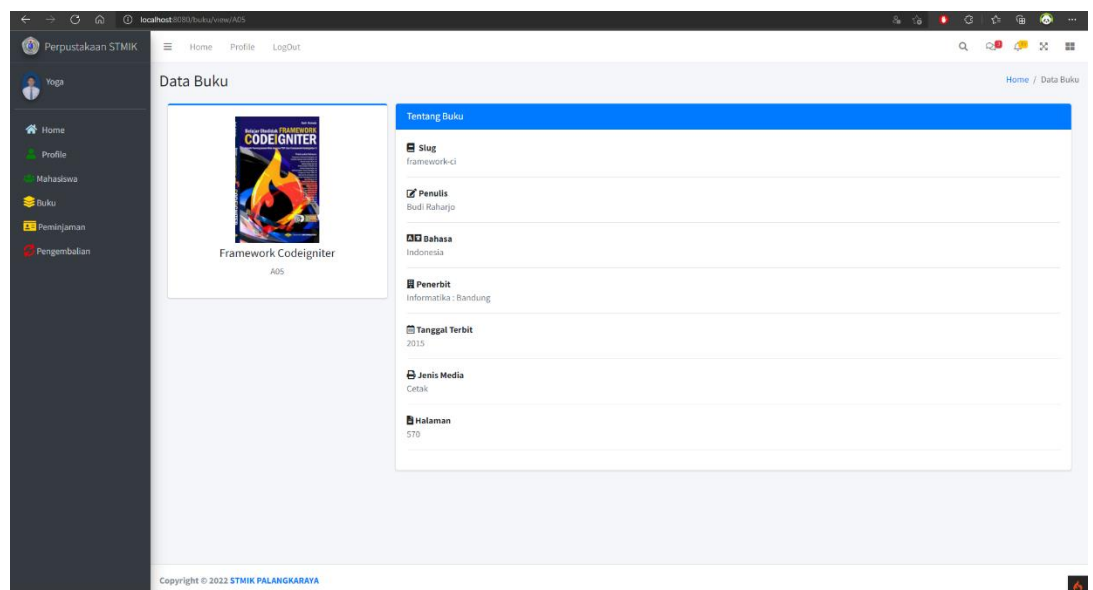
```

```

                                <strong><i class="far fa-calendar-
alt"></i> Tanggal Terbit</strong>
                                <p class="text-muted"><?= $buku-
>tanggal_terbit; ?></p>
                                <hr>
                                <strong><i class="fas fa-print"></i>
Jenis Media</strong>
                                <p class="text-muted"><?= $buku-
>jenis_media; ?></p>
                                <hr>
                                <strong><i class="fas fa-file-alt"></i>
Halaman</strong>
                                <p class="text-muted"><?= $buku-
>halaman; ?></p>
                                <hr>
                                </div>
                                <!-- /.card-body -->
                                </div>
                                <!-- /.card -->
                                </div>
                                </div>
                                <!-- /.card -->
                                </div>
</div>
<?= $this->endSection('content'); ?>

```

- Tampilan View Detail Buku



Fasilitas Peminjaman

1. Buat Table Peminjaman

Buat table peminjaman dengan cara ketik command berikut pada terminal VScode:

```
PS C:\xampp\htdocs\perpustakaan> php spark migrate:create peminjaman
```

Lalu akan terbuat sebuah file didalam folder app/Database/Migrations, nama file tersebut akan diakhiri dengan nama Peminjaman, buka file tersebut, dan isi dengan codenya seperti berikut ini :

```
<?php

namespace App\Database\Migrations;

use CodeIgniter\Database\Migration;

class Buku extends Migration
{
    public function up()
    {
        $this->forge->addField([
            'id' => [
                'type' => 'VARCHAR',
                'constraint' => 11,
            ],
            'nama' => [
                'type' => 'VARCHAR',
                'constraint' => 255,
            ],
            'bukukode' => [
                'type' => 'VARCHAR',
                'constraint' => 11,
            ],
            'judul' => [
                'type' => 'VARCHAR',
                'constraint' => '255',
            ],
            'tanggal_pinjam' => [
                'type' => 'DATE',
```

```

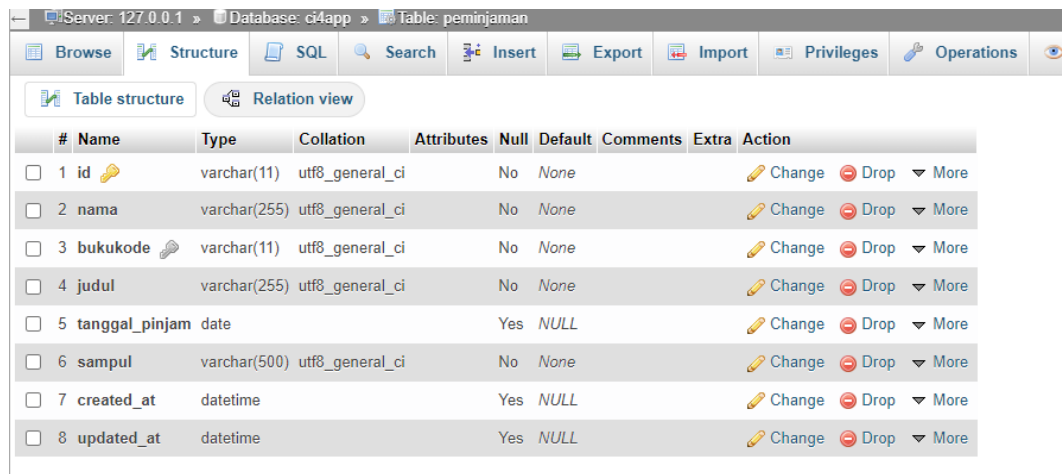
        'null' => true,
    ],
    'sampul' => [
        'type' => 'VARCHAR',
        'constraint' => '500',
    ],
    'created_at' => [
        'type' => 'DATETIME',
        'null' => true,
    ],
    'updated_at' => [
        'type' => 'DATETIME',
        'null' => true,
    ]
]);
$this->forge->addPrimaryKey('id');
$this->forge->createTable('peminjaman');
}
//-----
-----
public function down()
{
    $this->forge->dropTable('peminjaman');
}
}

```

Berikutnya kita akan menjalankan file migration untuk membuat tabel didatabase, masuk ke project codeigniter melalui terminal, lalu jalankan perintah :

```
PS C:\xampp\htdocs\perpustakaan> php spark migrate
```

Cek database pada phpmyadmin untuk melihat struktur table yang telah dibuat melalui fitur migration yang ada pada codeigniter 4



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 id	varchar(11)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	2 nama	varchar(255)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	3 bukukode	varchar(11)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	4 judul	varchar(255)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	5 tanggal_pinjam	date			Yes	NULL			Change Drop More
<input type="checkbox"/>	6 sampul	varchar(500)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	7 created_at	datetime			Yes	NULL			Change Drop More
<input type="checkbox"/>	8 updated_at	datetime			Yes	NULL			Change Drop More

2. Insert Dummy Data

Membuat Insert Dummy Data menggunakan Seeding yang telah disediakan oleh Codeigniter 4.

Masuk kedalam project codeigniter 4, melalui terminal, lalu jalankan perintah dibawah ini :

```
PS C:\xampp\htdocs\perpustakaan> php spark make:seeder PeminjamanSeeder
```

lalu tekan enter, jika berhasil maka akan terbuat sebuah file dengan nama PeminjamanSeeder.php didalam folder app\Database\Seeds\ buka file tersebut, lalu tuliskan code didalam file PeminjamanSeeder.php

```
<?php

namespace App\Database\Seeds;

use CodeIgniter\Database\Seeder;
use CodeIgniter\I18n\Time;

class PeminjamanSeeder extends Seeder
{
    public function run()
```

```

{
    $data = [
        [
            'id' => '1',
            'nama' => 'Yoga',
            'bukukode' => '',
            'judul' => 'Matematika',
            'tanggal_pinjam' => Time::now(),
            'created_at' => Time::now()
        ],
        [
            'id' => '2',
            'nama' => 'Sholeh',
            'bukukode' => '',
            'judul' => 'Fisika',
            'tanggal_pinjam' => Time::now(),
            'created_at' => Time::now()
        ],
    ];
    $this->db->table('peminjaman')->insertBatch($data);
}
}

```

jalankan perintah diatas untuk insert data buku tersebut ke dalam tabel peminjaman, silahkan masuk ke folder project codeigniter melalui terminal, lalu jalankan perintah sebagai berikut ini :

```

PS C:\xampp\htdocs\perpustakaan> php spark db:seed PeminjamanSeeder

```

3. Model Peminjaman

Buat file model dengan nama PeminjamanModel.php, simpan file tersebut didalam folder app/Models

lalu isi file PeminjamanModel.php dengan code sebagai berikut :

```

<?php

```

```

namespace App\Models;

use CodeIgniter\Model;

class PeminjamanModel extends Model
{
    protected $table = "peminjaman";
    protected $primaryKey = "id";
    protected $returnType = "object";
    protected $useTimestamps = true;
    protected $allowedFields = [
        'id', 'nama', 'bukukode', 'judul', 'tanggal_pinjam',
        'sampul'
    ];
}

```

4. Controller Peminjaman

Buat sebuah controller dengan nama file **Peminjaman.php** didalam folder app/Controllers, dan isi dengan code seperti berikut ini :

```

<?php

namespace App\Controllers;

use App\Models\PeminjamanModel;

class Peminjaman extends BaseController
{
    protected $peminjaman;
    function __construct()
    {
        $this->peminjaman = new PeminjamanModel();
    }

    public function index()
    {
        $data['pageTitle'] = 'DAFTAR PEMINJAMAN';
        $data['peminjaman'] = $this->peminjaman->findAll();
        return view('dashboard/peminjaman', $data);
    }
}

```



```

public function view($kode)
{
    $dataBuku = $this->buku->find($kode);
    if (empty($dataBuku)) {
        throw new
\CodeIgniter\Exceptions\PageNotFoundException('Data Buku Tidak
ditemukan !');
    }
    $data['pageTitle'] = 'Data Buku';
    $data['buku'] = $dataBuku;
    return view('dashboard/buku_view', $data);
}

function pengembalian($id)
{
    $dataPeminjaman = $this->peminjaman->find($id);
    if (empty($dataPeminjaman)) {
        throw new
\CodeIgniter\Exceptions\PageNotFoundException('Data Buku Tidak
ditemukan !');
    }
    $this->peminjaman->delete($id);

    session()->setFlashdata('message', 'Pengembalian Buku yang
dipinjam Berhasil');
    return redirect()->to('/peminjaman');
}

public function create()
{
    $data['pageTitle'] = 'Input Data Peminjam';
    return view('dashboard/peminjaman_create', $data);
}
public function store()
{
    if (!$this->validate([
        'id' => [
            'rules' => 'required',
            'errors' => [
                'required' => '{field} Harus diisi'
            ]
        ],
        'nama' => [
            'rules' => 'required',

```

```

        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'bukukode' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'judul' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    'tanggal_pinjam' => [
        'rules' => 'required',
        'errors' => [
            'required' => '{field} Harus diisi'
        ]
    ],
    ]), {
        session()->setFlashdata('error', $this->validator-
>listErrors());
        return redirect()->back()->withInput();
    }
    $this->peminjaman->insert([
        'id' => $this->request->getVar('id'),
        'nama' => $this->request->getVar('nama'),
        'bukukode' => $this->request->getVar('bukukode'),
        'judul' => $this->request->getVar('judul'),
        'tanggal_pinjam' => $this->request-
>getVar('tanggal_pinjam'),

    ]);
    session()->setFlashdata('message', 'Tambah Peminjam Buku
Berhasil');
    return redirect()->to('/peminjaman');
}
}

```

Kemudian edit kembali file routes.php yang ada pada folder apps/config/routes.php dengan menambahkan :

```
//peminjaman
$routes->get('/peminjaman', 'Peminjaman::index');
$routes->get('/peminjaman/create', 'Peminjaman::create');
$routes->get('/peminjaman/store', 'Peminjaman::store');
```

5. Halaman View Peminjaman

Membuat Halaman View **peminjaman.php** pada folder app/views/dashboard/

```
<?= $this->extend('layout/dashboard-layout'); ?>

<?= $this->section('content'); ?>

<link rel="stylesheet" href="/css/style.css">

<div class="card-body">
    <?php if (!empty(session()->getFlashdata('message'))) : ?>
        <div class="alert alert-success alert-dismissible fade show"
role="alert">
            <?php echo session()->getFlashdata('message'); ?>
            <button type="button" class="close" data-dismiss="alert"
aria-label="Close">
                <span aria-hidden="true">&times;</span>
            </button>
        </div>
    <?php endif; ?>

    <div class="col">
        <table class="table table-bordered">
            <a title="Tambah Daftar Peminjam" href="<?=
base_url('/peminjaman'); ?>" class="fas fa-users fa-2x"
style="color:green"></a>
            <p></p>
            <thead>
                <tr>
                    <th scope="col">No</th>
                    <th scope="col">Nama</th>
                    <th scope="col">Kode Buku</th>
                    <th scope="col">Sampul</th>
```

```

        <th scope="col">Judul Buku</th>
        <th scope="col">Tanggal Pinjam</th>
        <th scope="col">Status</th>
    </tr>
</thead>
<tbody>
    <?php
    foreach ($peminjaman as $lb) {
    ?>
        <tr>
            <td><?= $lb->id; ?></td>
            <td><?= $lb->nama; ?></td>
            <td><?= $lb->bukukode; ?></td>
            <div class="text-center">
                <td></td>
            </div>
            <td><?= $lb->judul; ?></td>
            <td><?= $lb->tanggal_pinjam; ?></td>
            <td>
                <a class="btn btn-success">Sedang
Dipinjam</a>
            </td>
        </tr>
    <?php
    }
    ?>
</tbody>
</table>
</div>
</div>
<?= $this->endSection('content'); ?>

```

6. Fitur Create Peminjaman

Buat Form Input Data pada folder `app/views/dashboard/peminjaman_create.php` untuk isi kode program seperti di bawah ini :

peminjaman_create.php

```

<?= $this->extend('layout/dashboard-layout'); ?>

```

```

<?= $this->section('content'); ?>
<div class="col-md-10">
    <!-- general form elements -->
    <div class="card card-primary">
        <div class="card-header">
            <h3 class="card-title">Tambah Peminjam Buku</h3>
        </div>
        <!-- /.card-header -->
        <!-- form start -->
        <?php if (!empty(session()->getFlashdata('error'))): ?>
            <div class="alert alert-light alert-dismissible fade
show" role="alert">
                <h4 class="alert-heading">Periksa Entrian Form</h4>
                <hr />
                <?php echo session()->getFlashdata('error'); ?>
                <button type="button" class="close" data-
dismiss="alert" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
        <?php endif; ?>
        <form class="form-horizontal" method="post" action="<?=
base_url('peminjaman/store') ?>" enctype="multipart/form-data">
            <?= csrf_field(); ?>
            <div class="card-body">

                <div class="form-group row">
                    <label for="nama" class="col-sm-2 col-form-
label">No</label>
                    <div class="col-sm-6">
                        <input type="text" class="form-control"
id="id" name="id" value="<?= old('id'); ?>">
                    </div>
                </div>

                <div class="form-group row">
                    <label for="nama" class="col-sm-2 col-form-
label">Nama Peminjam</label>
                    <div class="col-sm-6">
                        <input type="text" class="form-control"
id="nama" name="nama" value="<?= old('nama'); ?>">
                    </div>
                </div>

                <div class="form-group row">

```

```

        <label for="jurusan" class="col-sm-2 col-form-label">Kode Buku</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="bukukode" name="bukukode" value="<?= old('bukukode'); ?>">
        </div>
    </div>

    <div class="form-group row">
        <label for="jenis_kelamin" class="col-sm-2 col-form-label">Judul Buku</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="judul" name="judul" value="<?= old('judul'); ?>">
        </div>
    </div>

    <div class="form-group row">
        <label for="jurusan" class="col-sm-2 col-form-label">Tanggal Pinjam</label>
        <div class="col-sm-6">
            <input type="text" class="form-control"
id="tanggal_pinjam" name="tanggal_pinjam" value="<?= date('Y-m-d'); ?>">
        </div>
    </div>

</div>
</div>
<!-- /.card-body -->
<div class="card-footer">
    <button type="submit" class="btn btn-primary">Simpan</button>
</div>
<!-- /.card-footer -->
</form>
</div>
<!-- /.card -->
</div>
<?= $this->endSection('content'); ?>

```

Fasilitas Pengembalian

1. Halaman View Pengembalian

Membuat Halaman View **pengembalian.php** pada folder **app/views/dashboard/**

```
<?= $this->extend('layout/dashboard-layout'); ?>

<?= $this->section('content'); ?>

<link rel="stylesheet" href="/css/style.css">

<div class="card-body">
    <?php if (!empty(session()->getFlashdata('message'))): ?>
        <div class="alert alert-success alert-dismissible fade show"
        role="alert">
            <?php echo session()->getFlashdata('message'); ?>
            <button type="button" class="close" data-dismiss="alert"
            aria-label="Close">
                <span aria-hidden="true">&times;</span>
            </button>
        </div>
    <?php endif; ?>

    <div class="col">
        <table class="table table-bordered">
            <p></p>
            <thead>
                <tr>
                    <th scope="col">No</th>
                    <th scope="col">Nama</th>
                    <th scope="col">Kode Buku</th>
                    <th scope="col">Sampul</th>
                    <th scope="col">Judul Buku</th>
                    <th scope="col">Tanggal Pinjam</th>
                    <th scope="col">Pengembalian</th>
                </tr>
            </thead>
            <tbody>
                <?php
                foreach ($peminjaman as $lb) {
                    ?>
                    <tr>
```

```

        <td><?= $lb->id; ?></td>
        <td><?= $lb->nama; ?></td>
        <td><?= $lb->bukukode; ?></td>
        <div class="text-center">
            <td></td>
        </div>
        <td><?= $lb->judul; ?></td>
        <td><?= $lb->tanggal_pinjam; ?></td>
        <td>
            <a title="Kembalikan" href="<?=
base_url("peminjaman/pengembalian/$lb->id") ?>" class="fas fa-sync
fa-spin" style="color:red" onclick="return confirm('Apakah Anda
yakin Ingin Mengembalikan Buku ?')"></a>
        </td>
    </tr>
    <?php
    }
    ?>
</tbody>
</table>
</div>
</div>
<?= $this->endSection('content'); ?>

```

2. Controller Pengembalian

Buat sebuah controller dengan nama file **Pengembalian.php** didalam folder **app/Controllers**, dan isi dengan code seperti berikut ini :

```

<?php

namespace App\Controllers;

use App\Models\PeminjamanModel;

class Pengembalian extends BaseController
{
    protected $peminjaman;
    function __construct()

```



```

{
    $this->peminjaman = new PeminjamanModel();
}

public function index()
{
    $data['pageTitle'] = 'DAFTAR PENGEMBALIAN';
    $data['peminjaman'] = $this->peminjaman->findAll();
    return view('dashboard/pengembalian', $data);
}
}

```

Kemudian edit kembali file **routes.php** yang ada pada folder **apps/config/routes.php** dengan menambahkan :

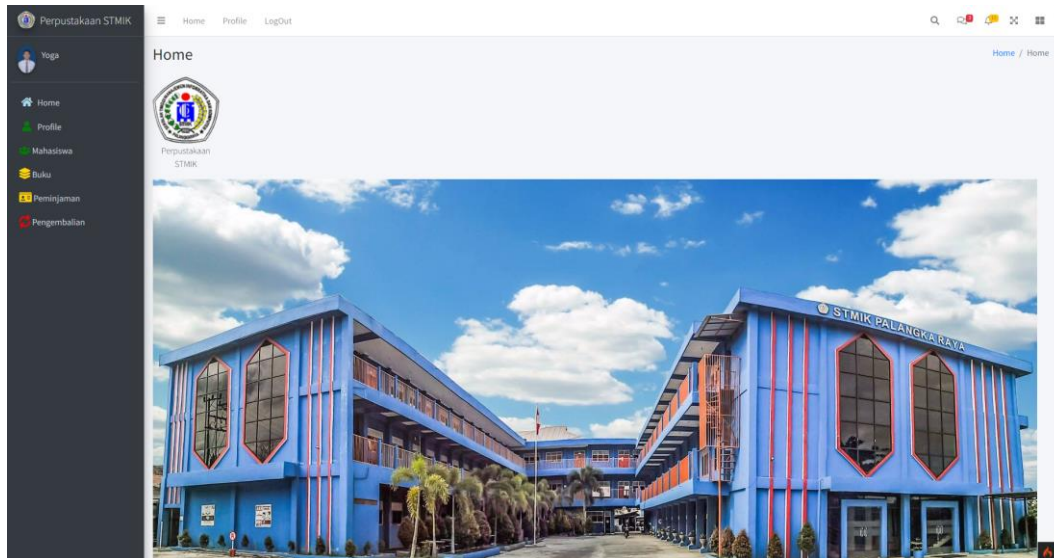
```

//pengembalian
$route->get('/pengembalian', 'Pengembalian::index');

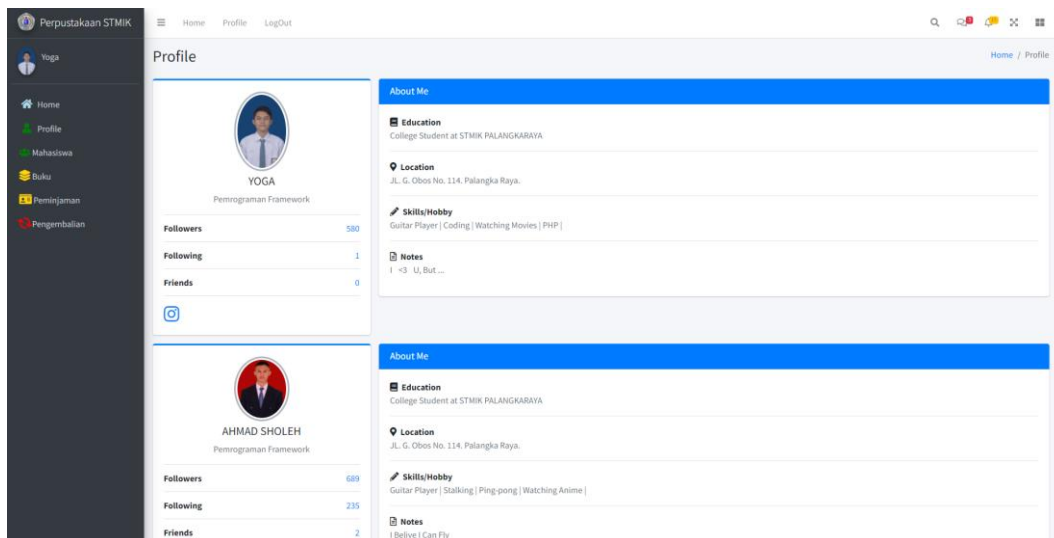
```

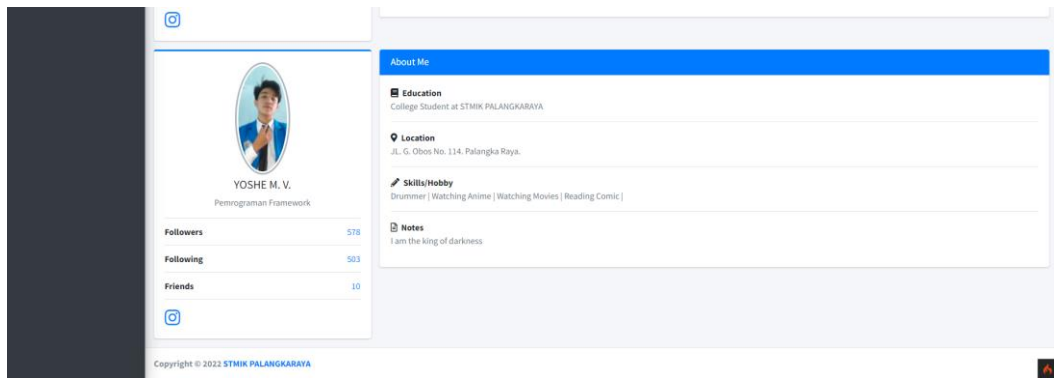
Tampilan Front End

- Menu Home



- Menu Profile

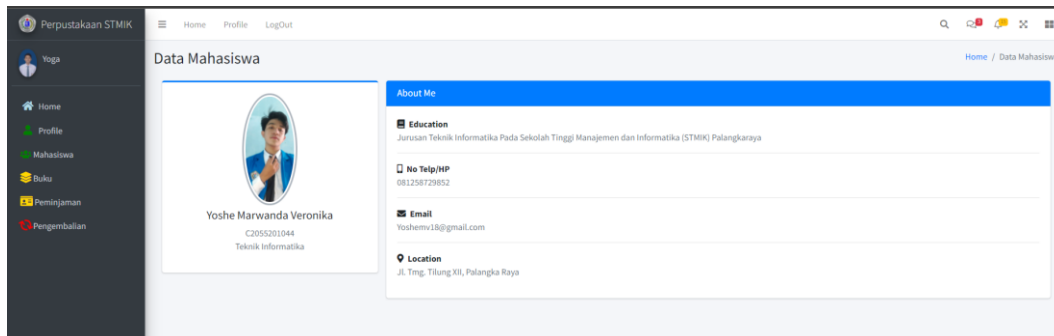




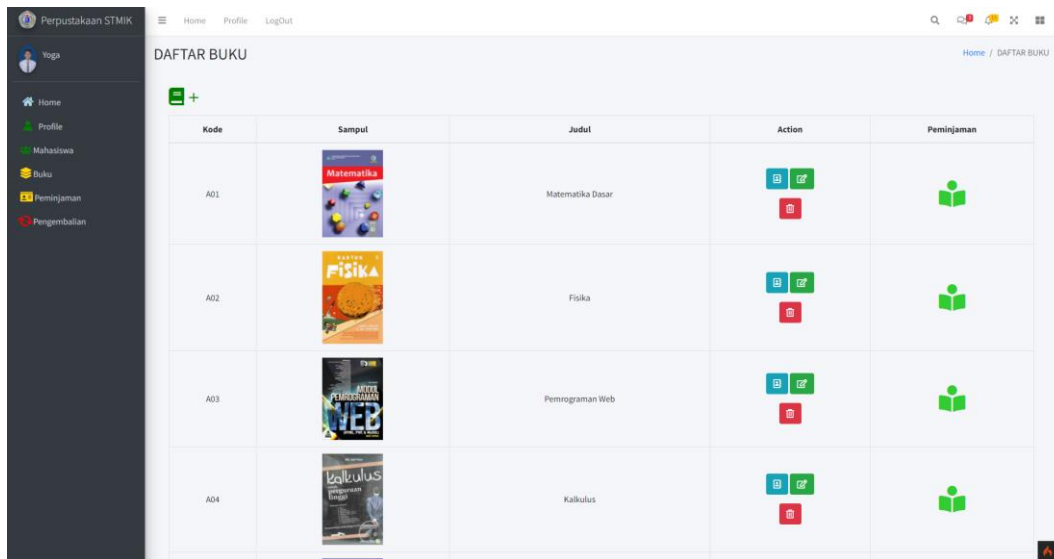
- Menu Mahasiswa



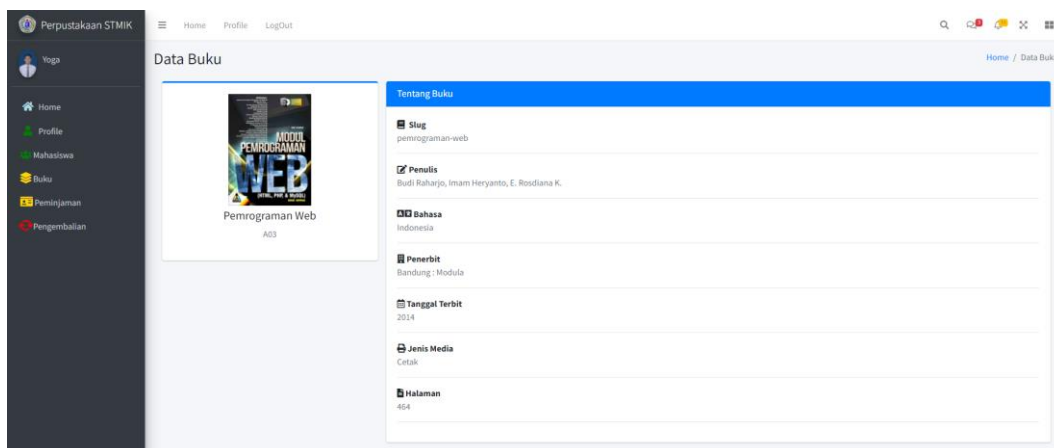
- Menu View Detail Mahasiswa



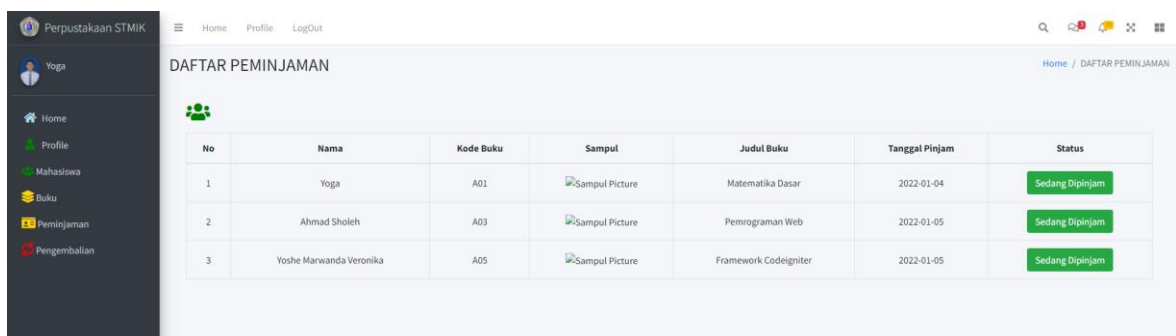
- Menu Buku



- Menu View Detail Buku



- Menu Peminjaman



- Menu Pengembalian

Perpustakaan STMIK

Home Profile LogOut

Yoga

Home
Profile
Mahasiswa
Buku
Peminjaman
Pengembalian

DAFTAR PENGEMBALIAN
[Home](#) / DAFTAR PENGEMBALIAN

No	Nama	Kode Buku	Sampul	Judul Buku	Tanggal Pinjam	Pengembalian
1	Yoga	A01		Matematika Dasar	2022-01-04	
2	Ahmad Sholeh	A03		Pemrograman Web	2022-01-05	
3	Yoshe Marwanda Veronika	A05		Framework Codeigniter	2022-01-05	