

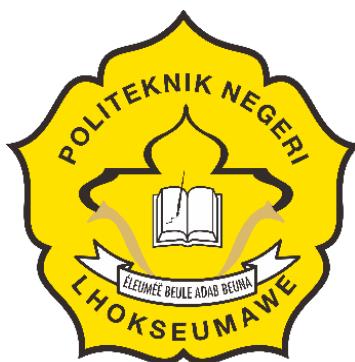
LAPORAN PRAKTIKUM

Docker Flask Web Peminjaman



Disusun Oleh:

Nama : 1. Muhammad Ajra Zemima Muda
2. L Hafidl Alkhair
Kelas : TRKJ 2.C
Jurusan : Teknologi Informasi dan Komputer
Program Studi : Teknologi Rekayasa Komputer Jaringan
Dosen Pembimbing : Indrawati, SST., M.T.



**JURUSAN TEKNOLOGI INFORMASI KOMPUTER
PRODI TEKNOLOGI REKAYASA KOMPUTER JARINGAN
POLITEKNIK NEGERI LHOKSEUMAWE
TAHUN AJARAN 2024-2025**

LEMBAR PENGESAHAN

No Praktikum : 02/TIK/TRKJ-2C/Komputasi Awan
Judul : Laporan Praktikum Docker Flask Web Peminjaman
Nama :
1. Muhammad Ajra Zemima Muda
2. L Hafidl Alkhair
Kelas : TRKJ 2.C
Jurusan : Teknologi Informasi dan Komputer
Prodi : Teknologi Rekayasa Komputer Jaringan
Tanggal Praktikum : Jum'at 15 Mei
Tanggal Penyerahan : Jum'at, 22 Mei 2025

Buketrata, 22 Mei 2025

Dosen Pembimbing,

Indrawati, SST., M.T.

NIP. 19740815 200112 2 001

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BAB I

PENDAHULUAN

A. Dasar Teori

Docker adalah sebuah platform open-source yang digunakan untuk mengembangkan, mengirim, dan menjalankan aplikasi dalam sebuah container. Container adalah unit standar perangkat lunak yang mengemas kode dan semua dependensinya sehingga aplikasi dapat berjalan secara konsisten di berbagai lingkungan.

Menurut dokumentasi resmi Docker:

"Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate your applications from your infrastructure so you can deliver software quickly." (Docker Docs, 2024)

“Docker adalah platform terbuka untuk mengembangkan, mendistribusikan, dan menjalankan aplikasi. Docker memungkinkan Anda untuk memisahkan aplikasi Anda dari infrastruktur sehingga Anda dapat mengirimkan perangkat lunak dengan lebih cepat.”

Aplikasi peminjaman barang merupakan sistem informasi berbasis web yang dirancang untuk mempermudah proses pencatatan dan pengelolaan peminjaman barang. Dengan menggunakan bahasa pemrograman Python dan framework Flask, aplikasi ini memungkinkan pengguna untuk melakukan login, registrasi, dan mengajukan peminjaman barang secara daring. Selain itu, Docker digunakan untuk mempermudah proses deployment dengan lingkungan yang terisolasi dan konsisten.

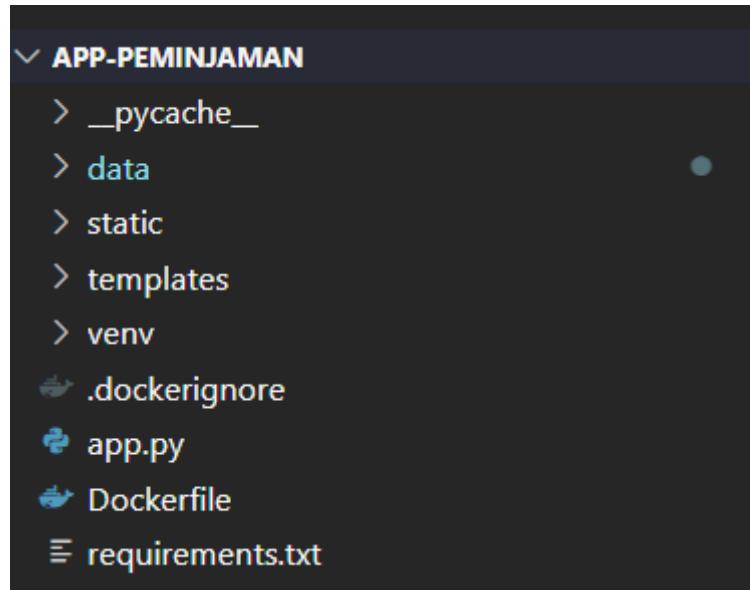
B. Alat dan bahan

1. Bahasa Pemrograman: Python 3.x
2. Framework: Flask
3. Database: SQLite
4. Docker
5. Editor Kode: Visual Studio Code
6. Browser: Google Chrome atau Mozilla Firefox
7. Sistem Operasi: Windows/Linux

BAB II

LANGKAH PRAKTIKUM

A. Membuat struktur folder proyek app peminjaman.



Gambar 1 1 struktur folder

B. Membuat file app.py sebagai main app untuk routing dan logika backend.

```
from flask import Flask, render_template, request, redirect, url_for, session, flash, abort
from werkzeug.utils import secure_filename
from datetime import datetime
import os, json
from functools import wraps

app = Flask(__name__)
app.secret_key = 'rahasia123'

UPLOAD_FOLDER = 'static/uploads'
app.config['UPLOAD_FOLDER'] = UPLOAD_FOLDER

DATA_USER = 'data/users.json'
```

```

DATA_PINJAMAN = 'data/peminjaman.json'
DATA_LOG = 'data/log_activity.json'
ALLOWED_EXTENSIONS = {'png', 'jpg', 'jpeg'}
```

===== Fungsi Utilitas =====

```

def load_json(path, default):
    if not os.path.exists(path): return default
    with open(path, 'r') as f:
        try: return json.load(f)
        except: return default
```

```

def save_json(path, data):
    with open(path, 'w') as f:
        json.dump(data, f, indent=2)
```

```

def allowed_file(filename):
    return '.' in filename and filename.rsplit('.', 1)[1].lower() in
ALLOWED_EXTENSIONS
```

```

def log_activity(username, aksi):
    logs = load_json(DATA_LOG, [])
    logs.append({
        "username": username,
        "aksi": aksi,
        "waktu": datetime.now().strftime("%d-%m-%Y %H:%M:%S")
    })
    save_json(DATA_LOG, logs)
```

```

@app.template_filter('rupiah')
def rupiah(value):
    try: return f"Rp {int(value)};,.replace(", ", ".")
    except: return value
```

```

@app.template_filter('tanggal_format')
```

```

def tanggal_format(value):
    try: return datetime.strptime(value, "%Y-%m-%d").strftime("%d-%m-%Y")
    except: return value

# ===== Decorator untuk Admin Required =====
def admin_required(f):
    @wraps(f)
    def decorated_function(*args, **kwargs):
        if session.get('role') != 'admin':
            abort(403) # Kembalikan error 403 Forbidden
        return f(*args, **kwargs)
    return decorated_function

# ===== Error Handler untuk 403 Forbidden =====
@app.errorhandler(403)
def forbidden(e):
    return render_template("forbidden.html"), 403

# ===== ROUTES =====
@app.route('/')
def landing():
    return render_template('landing.html')

@app.route('/register', methods=['GET', 'POST'])
def register():
    if request.method == 'POST':
        users = load_json(DATA_USER, {})
        username = request.form['username'].strip()
        if username in users:
            flash("Username sudah digunakan", 'error')
            return redirect(url_for('register'))

        users[username] = {
            'password': request.form['password'],

```

```

    "email": request.form['email'],
    "nama": "",
    "tempat_lahir": "",
    "kota": "",
    "provinsi": "",
    "jenis_kelamin": "",
    "foto": "",
    "role": "user",
    "tanggal_daftar": datetime.now().strftime("%Y-%m-%d"),
    "total_pinjaman": 0
}

save_json(DATA_USER, users)
flash("Registrasi berhasil, silakan login", "success")
return redirect(url_for('login'))

return render_template('register.html')

@app.route('/login', methods=['GET', 'POST'])
def login():
    if request.method == 'POST':
        users = load_json(DATA_USER, {})
        username = request.form['username']
        password = request.form['password']
        user = users.get(username)

        if user and user['password'] == password:
            session['username'] = username
            session['role'] = user['role']
            log_activity(username, "Login")
            return redirect(url_for('admin_dashboard' if user['role'] == 'admin' else
            'user_dashboard'))
        else:
            flash("Username atau password salah", 'error')

```

```

    return render_template('login.html')

@app.route('/verifikasi')
def verifikasi():
    if 'username' not in session:
        return redirect(url_for('login'))

    users = load_json(DATA_USER, {})
    user = users.get(session['username'])

    return render_template('verifikasi-biodata.html', profile=user)

@app.route('/upload-foto', methods=['POST'])
def upload_foto():
    if 'username' not in session:
        return redirect(url_for('login'))

    if 'foto' not in request.files:
        flash("Tidak ada file foto yang diupload", 'error')
        return redirect(url_for('verifikasi'))

    file = request.files['foto']
    if file and allowed_file(file.filename):
        filename = secure_filename(f'{session["username"]}_{file.filename}')
        filepath = os.path.join(app.config['UPLOAD_FOLDER'], filename)
        file.save(filepath)

        users = load_json(DATA_USER, {})
        users[session['username']]['foto'] = filename
        save_json(DATA_USER, users)
        flash("Foto berhasil diunggah", "success")
    else:
        flash("Format file tidak didukung", 'error')

```

```

    return redirect(url_for('verifikasi'))


@app.route('/user')
def user_dashboard():
    if 'username' not in session:
        return redirect(url_for('login'))

    data = load_json(DATA_PINJAMAN, [])
    user_data = [d for d in data if d['username'] == session['username']]
    users = load_json(DATA_USER, {})
    user = users.get(session['username'], {})
    total = sum(int(d['jumlah']) for d in user_data)

    return render_template('user-dashboard.html', username=session['username'],
                           nama=user.get("nama", "User"), data=user_data, total=total)


@app.route('/admin')
@admin_required
def admin_dashboard():
    users = load_json(DATA_USER, {})
    data_peminjaman = load_json(DATA_PINJAMAN, [])
    log_aktivitas = load_json(DATA_LOG, [])

    total_users = len(users) - 1 if "admin" in users else len(users)
    total_peminjaman = sum(int(item['jumlah']) for item in data_peminjaman)

    activity_logs = log_aktivitas[-5:]
    activity_logs.reverse()

    return render_template(
        'admin-dashboard.html',
        total_users=total_users,
        total_peminjaman=total_peminjaman,
        user_activities=activity_logs
    )

```

```

        )

@app.route('/admin/peminjaman')
@admin_required
def admin_peminjaman():
    data_peminjaman = load_json(DATA_PINJAMAN, [])
    return render_template('admin-peminjaman.html', data=data_peminjaman)

@app.route('/admin/users')
@admin_required
def admin_users():
    data_users = load_json(DATA_USER, {})
    return render_template('admin-users.html', users=data_users)

@app.route('/admin/setujui/<int:id>', methods=['POST'])
@admin_required
def setujui_peminjaman(id):
    data_peminjaman = load_json(DATA_PINJAMAN, [])
    users = load_json(DATA_USER, {})

    for pinjam in data_peminjaman:
        if pinjam['id'] == id and pinjam['status'] != 'Disetujui':
            pinjam['status'] = 'Disetujui'
            username = pinjam['username']
            jumlah_pinjaman = int(pinjam['jumlah'])

            user = users.get(username)
            if user:
                user['total_pinjaman'] = user.get('total_pinjaman', 0) + jumlah_pinjaman
                flash(f"Peminjaman {id} disetujui. Total pinjaman {username} bertambah menjadi {rupiah(user['total_pinjaman'])}.", "success")
            else:
                flash(f"User {username} tidak ditemukan.", "error")

```

```

    save_json(DATA_PINJAMAN, data_peminjaman)
    save_json(DATA_USER, users)
    return redirect(url_for('admin_peminjaman'))

@app.route('/admin/tolak/<int:id>', methods=['POST'])
@admin_required
def tolak_peminjaman(id):
    data_peminjaman = load_json(DATA_PINJAMAN, [])
    for pinjam in data_peminjaman:
        if pinjam['id'] == id and pinjam['status'] != 'Ditolak':
            pinjam['status'] = 'Ditolak'
    save_json(DATA_PINJAMAN, data_peminjaman)
    return redirect(url_for('admin_peminjaman'))

@app.route('/admin/peminjaman/ubah_status_massal', methods=['POST'])
@admin_required
def ubah_status_peminjaman_massal():
    data_peminjaman = load_json(DATA_PINJAMAN, [])
    users = load_json(DATA_USER, {})

    for pinjam in data_peminjaman:
        id_pinjam = str(pinjam['id'])
        status_baru = request.form.get(f'status_{id_pinjam}')

        if status_baru and pinjam['status'] != status_baru:
            status_lama = pinjam['status']
            pinjam['status'] = status_baru
            username = pinjam['username']
            jumlah_pinjaman = int(pinjam['jumlah'])

            if pinjam['status'] == 'Selesai' and status_lama != 'Selesai':
                user = users.get(username)
                if user:
                    user['total_pinjaman'] = user.get('total_pinjaman', 0) - jumlah_pinjaman

```

```

    flash(f"Peminjaman {id_pinjam} diselesaikan. Total pinjaman {username}
berkurang menjadi {rupiah(user['total_pinjaman'])}.", "success")
else:
    flash(f"User {username} tidak ditemukan.", "error")

flash(f"Status peminjaman {id_pinjam} berhasil diubah menjadi {status_baru}",
"success")

save_json(DATA_PINJAMAN, data_peminjaman)
save_json(DATA_USER, users)
return redirect(url_for('admin_peminjaman'))

@app.route('/user/form', methods=['GET', 'POST'])
def form_peminjaman():
    if session.get('role') != 'user':
        return redirect(url_for('login'))

    users = load_json(DATA_USER, {})
    user = users.get(session['username'])

    if not all([user.get("nama"), user.get("tempat_lahir"), user.get("kota"),
               user.get("provinsi"), user.get("jenis_kelamin"), user.get("foto")]):
        flash("Lengkapi biodata dan upload foto sebelum mengajukan pinjaman!",
              "error")
        return redirect(url_for('verifikasi'))

    if request.method == 'POST':
        data = load_json(DATA_PINJAMAN, [])
        username = session['username']
        jumlah_pinjaman = int(request.form.get('jumlah'))

        peminjaman = {
            "id": len(data) + 1,
            "username": username,

```

```

        "jumlah": str(jumlah_pinjaman),
        "tanggal_pinjam": request.form.get('tanggal_pinjam'),
        "tanggal_kembali": request.form.get('tanggal_kembali'),
        "status": "Menunggu"
    }
    data.append(peminjaman)

flash("Peminjaman berhasil diajukan. Menunggu persetujuan Admin.", "success")
save_json(DATA_PINJAMAN, data)
log_activity(session['username'], "Ajukan Peminjaman")
return redirect(url_for('user_dashboard'))

return render_template('form-peminjaman.html')

@app.route('/user/edit', methods=['GET', 'POST'])
def edit_profile():
    if 'username' not in session:
        return redirect(url_for('login'))

    users = load_json(DATA_USER, {})
    username = session['username']
    profile = users.get(username, {})

    if request.method == 'POST':
        profile['nama'] = request.form['nama']
        profile['tempat_lahir'] = request.form['tempat_lahir']
        profile['kota'] = request.form['kota']
        profile['provinsi'] = request.form['provinsi']
        profile['jenis_kelamin'] = request.form['jenis_kelamin']
        profile['password'] = request.form['password']
        users[username] = profile
        save_json(DATA_USER, users)
        flash("Profil berhasil diperbarui", "success")
        return redirect(url_for('verifikasi'))

```

```

return render_template('edit-profile.html', profile=profile)

@app.route('/logout')
def logout():
    log_activity(session.get('username', 'unknown'), "Logout")
    session.clear()
    return redirect(url_for('landing'))

# LAPORAN PEMINJAMAN
@app.route('/admin/laporan', methods=['GET', 'POST'])
@admin_required
def laporan_peminjaman():
    if request.method == 'POST':
        tgl_awal = request.form['tgl_awal']
        tgl_akhir = request.form['tgl_akhir']

        data_pinjaman = load_json(DATA_PINJAMAN, [])
        data_user = load_json(DATA_USER, {})

        data_laporan = [
            p for p in data_pinjaman
            if tgl_awal <= p['tanggal_pinjam'] <= tgl_akhir
        ]

        total_peminjaman = sum(int(p['jumlah']) for p in data_laporan)

        for p in data_laporan:
            username = p['username']
            p['nama_peminjam'] = data_user.get(username, {}).get('nama', 'Tidak
Diketahui')

    return render_template(
        'admin/laporan-peminjaman.html',

```

```

    tgl_awal=tgl_awal,
    tgl_akhir=tgl_akhir,
    total_peminjaman=total_peminjaman,
    data_laporan=data_laporan
)

return render_template('admin/form-laporan.html')

@app.route('/admin/laporan/cetak', methods=['GET'])
@admin_required
def cetak_laporan():
    tgl_awal = request.args.get('tgl_awal')
    tgl_akhir = request.args.get('tgl_akhir')

    data_pinjaman = load_json(DATA_PINJAMAN, [])
    data_user = load_json(DATA_USER, {})

    data_laporan = [
        p for p in data_pinjaman
        if tgl_awal <= p['tanggal_pinjam'] <= tgl_akhir
    ]

    for p in data_laporan:
        username = p['username']
        p['nama_peminjam'] = data_user.get(username, {}).get('nama', 'Tidak
Diketahui')

    return render_template('cetak-laporan.html', data_laporan=data_laporan,
    tgl_awal=tgl_awal, tgl_akhir=tgl_akhir)

if __name__ == '__main__':
    os.makedirs('data', exist_ok=True)
    os.makedirs(UPLOAD_FOLDER, exist_ok=True)

```

```
if not os.path.exists(DATA_USER):
    save_json(DATA_USER, {
        "admin": {
            "password": "admin123",
            "email": "admin@example.com",
            "nama": "Admin",
            "tempat_lahir": "",
            "kota": "",
            "provinsi": "",
            "jenis_kelamin": "",
            "foto": "",
            "role": "admin",
            "tanggal_daftar": datetime.now().strftime("%Y-%m-%d"),
            "total_pinjaman": 0
        }
    })
app.run(debug=True)
```

C. Membuat Tampilan HTML dan CSS

1. Membuat templates/layouts/base.html

```
<!DOCTYPE html>
<html lang="id">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>{% block title %}Admin Panel{% endblock %}</title>
    <link
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
        rel="stylesheet">
    <link    rel="stylesheet"    href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0/css/all.min.css"           integrity="sha512-9usAa10IRO0HhonpyAIVpjrylPvoDwiPUiKdWk5t3PyolY1cOd4DSE0Ga+ri4AuTroPR5aQvXU9xC6qOPnzFeg=="
        crossorigin="anonymous"
        referrerPolicy="no-referrer" />
    <link rel="stylesheet" href="{{ url_for('static', filename='css/css/style.css') }}>
    <link rel="stylesheet" href="/static/css/admin.css">
</head>
<body>

    <div class="container-fluid">
        <div class="row">

            <!-- Sidebar -->
            <nav id="sidebar" class="col-md-3 col-lg-2 d-md-block sidebar">
                <div class="position-sticky">
                    <div class="sidebar-heading px-3 mt-4 mb-1 text-light">
                        <span>Menu</span>
                    </div>
                    <ul class="nav flex-column">
                        <li class="nav-item">
```

```

        <a      class="nav-link"    {%
          if    request.endpoint    ==
'admin_dashboard' %}active{%
endif %}" href="{{ url_for('admin_dashboard') }}">
          <i class="fas fa-tachometer-alt"></i> Dashboard
        </a>
      </li>
      <li class="nav-item">
        <a  class="nav-link"  {%
          if  request.endpoint  ==
'admin_users' %}active{%
endif %}" href="{{ url_for('admin_users') }}">
          <i class="fas fa-users"></i> Users
        </a>
      </li>
      <li class="nav-item">
        <a      class="nav-link"    {%
          if    request.endpoint    ==
'admin_peminjaman' %}active{%
endif %}" href="{{ url_for('admin_peminjaman') }}">
          <i class="fas fa-hand-holding-usd"></i> Peminjaman
        </a>
      </li>
      <li class="nav-item">
        <a      class="nav-link"    {%
          if    request.endpoint    ==
'laporan_peminjaman' %}active{%
endif %}" href="{{ url_for('laporan_peminjaman') }}">
          <i class="fas fa-chart-bar"></i> Laporan
        </a>
      </li>
      <li class="nav-item mt-5">
        <a class="nav-link" href="{{ url_for('logout') }}">
          <i class="fas fa-sign-out-alt"></i> Logout
        </a>
      </li>
    </ul>
  </div>
</nav>

```

```

<!-- Main Content -->
<main class="main-content col-md-9 ms-sm-auto col-lg-10 px-md-4">
    <div class="d-flex justify-content-between flex-wrap flex-md-nowrap align-items-center pt-3 pb-2 mb-3 border-bottom">
        <h1 class="h2">{% block content_title %}{% endblock %}</h1>
        <div class="btn-toolbar mb-2 mb-md-0">
            {% block toolbar %}{% endblock %}
        </div>
    </div>

    {% block content %}
    <div class="card">
        <div class="card-header">
            <h5>Form Laporan Peminjaman</h5>
        </div>
        <div class="card-body">
            <form>
                <div class="mb-3">
                    <label for="tanggalAwal" class="form-label">Tanggal Awal:</label>
                    <input type="date" class="form-control" id="tanggalAwal" required>
                </div>
                <div class="mb-3">
                    <label for="tanggalAkhir" class="form-label">Tanggal Akhir:</label>
                    <input type="date" class="form-control" id="tanggalAkhir" required>
                </div>
                <button type="submit" class="btn-primary">Submit</button>
            </form>
        </div>
    </div>

```

```

        </div>
    {% endblock %}
</main>
</div>
</div>

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"
"></script>
<script src="{{ url_for('static', filename='js/script.js') }}"></script>
</body>
</html>

```

2. Membuat templates/layouts/layout.html

```

<!DOCTYPE html>
<html lang="id">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>{{ block.title }}Aplikasi Peminjaman{{ endblock }}</title>
    <link rel="stylesheet"
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css">
    <link
        href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap" rel="stylesheet">

    <link rel="stylesheet" href="/static/css/register.css">
<style>
body {
    font-family: 'Poppins', sans-serif;
    background-color: #f4f4f4;
    margin: 0;
    padding: 0;
    display: flex;
    justify-content: center;
}

```

```
    align-items: center;
    min-height: 100vh;
}

.container {
    background-color: #fff;
    padding: 20px;
    border-radius: 8px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    width: 80%;
    max-width: 600px;
}

h2 {
    color: #333;
    text-align: center;
}

p {
    color: #666;
    text-align: center;
}

table {
    width: 100%;
    border-collapse: collapse;
    margin-top: 20px;
}

th, td {
    padding: 12px 15px;
    text-align: left;
    border-bottom: 1px solid #ddd;
}
```

```
th {  
background-color: #f2f2f2;  
color: #333;  
}  
  
tr:hover {  
background-color: #f5f5f5;  
}  
  
.btn {  
display: inline-block;  
padding: 10px 15px;  
margin: 5px 0;  
border-radius: 5px;  
text-decoration: none;  
color: white;  
background-color: #5cb85c;  
border: none;  
cursor: pointer;  
}  
  
.btn-primary {  
background-color: #007bff;  
}  
  
.btn:hover {  
opacity: 0.8;  
}  
  
input[type="file"] {  
margin-top: 10px;  
margin-bottom: 10px;  
}
```

```

img {
    max-width: 100px;
    height: auto;
    display: block;
    margin-top: 5px;
}

/* Responsive Design */
@media (max-width: 600px) {
    .container {
        width: 95%;
        padding: 10px;
    }
}

th, td {
    padding: 8px;
    font-size: 0.9em;
}
}

</style>
{% block head %}{% endblock %}
</head>
<body>
    <div class="container">
        {% with messages = get_flashed_messages(with_categories=true) %}
            {% if messages %}
                <div class="mt-3">
                    {%for category, message in messages %}
                        <div class="alert alert-{{ category }} alert-dismissible fade show"
                            role="alert">
                            {{ message }}
                            <button type="button" class="btn-close" data-bs-
                            dismiss="alert" aria-label="Close"></button>
                
```

```

        </div>
    {%- endfor %}
</div>
{%- endif %}
{%- endwith %}

{%- block content %}{%- endblock %}
</div>

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"
"></script>
{%- block script %}{%- endblock %}
</body>
</html>

```

3. Membuat templates/admin/form-laporan.html

```

{% extends "layouts/base.html" %}

{% block content_title %}Form Laporan Peminjaman{% endblock %}

{% block content %}

<div class="container mt-4">
<div class="row justify-content-center">
<div class="col-md-8">
<div class="card">
<div class="card-header">
    Pilih Periode Laporan
</div>
<div class="card-body">
<form method="POST" action="{{ url_for('laporan_peminjaman') }}">
<div class="mb-3">
    <label for="tgl_awal" class="form-label">Tanggal Awal:</label>

```

```

<input type="date" class="form-control" id="tgl_awal"
name="tgl_awal" required>
</div>
<div class="mb-3">
    <label for="tgl_akhir" class="form-label">Tanggal
Akhir:</label>
    <input type="date" class="form-control" id="tgl_akhir"
name="tgl_akhir" required>
</div>
    <button type="submit" class="btn btn-primary">Generate
Laporan</button>
</form>
</div>
</div>
</div>
</div>
</div>
</div>
</div>

{% endblock %}

```

4. Membuat templates/admin/laporan-peminjaman.html

```

{% extends "layouts/base.html" %}
{% block content_title %}Laporan Peminjaman{% endblock %}
{% block content %}

<div class="container mt-4">
    <div class="card">
        <div class="card-header">
            Laporan Peminjaman
        </div>
        <div class="card-body">
            <p>Periode: {{ tgl_awal/tanggal_format }} - {{ tgl_akhir/tanggal_format
}}</p>
            <p>Total Peminjaman: {{ total_peminjaman/rupiah }}</p>

```

```

{%
if data_laporan %}
<div class="table-responsive">
    <table class="table table-bordered table-striped">
        <thead>
            <tr>
                <th>ID</th>
                <th>Username</th>
                <th>Nama Peminjam</th>
                <th>Jumlah</th>
                <th>Tgl Pinjam</th>
                <th>Tgl Kembali</th>
                <th>Status</th>
            </tr>
        </thead>
        <tbody>
            {%
for pinjaman in data_laporan %}
            <tr>
                <td>{{ pinjaman.id }}</td>
                <td>{{ pinjaman.username }}</td>
                <td>{{ pinjaman.nama_peminjam }}</td>
                <td>{{ pinjaman.jumlah/rupiah }}</td>
                <td>{{ pinjaman.tanggal_pinjam/tanggal_format }}</td>
                <td>{{ pinjaman.tanggal_kembali/tanggal_format }}</td>
                <td>{{ pinjaman.status }}</td>
            </tr>
            {%
endfor %}
        </tbody>
    </table>
</div>
{%
else %}
    <p>Tidak ada data peminjaman pada periode ini.</p>
{%
endif %}

```

```

<a href="{{ url_for('cetak_laporan', tgl_awal=tgl_awal,
                    tgl_akhir=tgl_akhir) }}" target="_blank" class="btn btn-secondary">
    <i class="fas fa-print"></i> Cetak Laporan
</a>
</div>
</div>
</div>

{% endblock %}

```

5. Membuat templates/admin-dashboard.html

```

{% extends "layouts/base.html" %}

{% block title %}Admin Dashboard{% endblock %}
{% block content_title %}Dashboard{% endblock %}

{% block content %}
<div class="container mt-4">
    <h2>Selamat Datang di Dashboard Admin!</h2>
    <div class="row">
        <div class="col-md-4">
            <div class="card">
                <div class="card-body">
                    <h5 class="card-title">Total User Terdaftar</h5>
                    <p class="card-text">{{ total_users }}</p>
                </div>
            </div>
        </div>
        <div class="col-md-4">
            <div class="card">
                <div class="card-body">
                    <h5 class="card-title">Total Peminjaman</h5>
                    <p class="card-text">{{ total_peminjaman / rupiah }}</p>
                </div>
            </div>
        </div>
    </div>
</div>

```

```

</div>
<div class="col-md-4">
<div class="card">
<div class="card-body">
<h5 class="card-title">Aktivitas User Terbaru</h5>
<ul>
{%- for activity in user_activities %}
<li>{{ activity.username }} - {{ activity.aksi }} ({{ activity.waktu
}})</li>
{%- endfor %}
</ul>
</div>
</div>
</div>
</div>
<% endblock %>
```

6. Membuat templates/admin-peminjaman.html

```

{%- extends "layouts/base.html" %}>
{%- block content_title %}Data Peminjaman{%- endblock %}>
{%- block content %}>

<div class="container mt-4">
<div class="card">
<div class="card-header">
    Data Peminjaman
</div>
<div class="card-body">
<form method="post" action="{{ url_for('ubah_status_peminjaman_massal') }}">
<div class="table-responsive">
<table class="table table-bordered table-striped">
<thead class="table-dark">
<tr>
```

```

<th>ID</th>
<th>Username</th>
<th>Jumlah</th>
<th>Tanggal Pinjam</th>
<th>Tanggal Kembali</th>
<th>Status</th>
</tr>
</thead>
<tbody>
{%
for item in data %}
<tr>
<td>{{ item.id }}</td>
<td>{{ item.username }}</td>
<td>{{ item.jumlah/rupiah }}</td>
<td>{{ item.tanggal_pinjam/tanggal_format }}</td>
<td>{{ item.tanggal_kembali/tanggal_format }}</td>
<td>
<select name="status_{{ item.id }}" class="form-control
form-control-sm">
<option value="Menunggu" {%
if item.status ==
'Menunggu' %}selected{%
endif %}>Menunggu</option>
<option value="Disetujui" {%
if item.status ==
'Disetujui' %}selected{%
endif %}>Disetujui</option>
<option value="Ditolak" {%
if item.status ==
'Ditolak' %}selected{%
endif %}>Ditolak</option>
</select>
</td>
</tr>
{%
endfor %}
</tbody>
</table>
</div>
<button type="submit" class="btn btn-primary">Simpan</button>
</form>

```

```

</div>
</div>
</div>

{% endblock %}

7. Membuat templates/admin-user.html

{% extends "layouts/base.html" %}

{% block title %}Admin Users{% endblock %}
{% block content_title %}Users{% endblock %}

{% block content %}
<div class="container mt-4">
    <h2>Daftar User</h2>
    <table class="table table-bordered table-striped">
        <thead>
            <tr>
                <th>Foto</th>
                <th>Username</th>
                <th>Email</th>
                <th>Nama Lengkap</th>
                <th>Tempat Lahir</th>
                <th>Kota</th>
                <th>Provinsi</th>
                <th>Jenis Kelamin</th>
                <th>Role</th>
            </tr>
        </thead>
        <tbody>
            {% for uname, u in users.items() %}
            <tr>
                <td>
                    {% if u.foto %}

```

```


{%
else %}
<span class="badge bg-warning">Belum Ada</span>
{%
endif %}
</td>
<td>{{ uname }}</td>
<td>{{ u.email }}</td>
<td>{{ u.nama }}</td>
<td>{{ u.tempat_lahir }}</td>
<td>{{ u.kota }}</td>
<td>{{ u.provinsi }}</td>
<td>{{ u.jenis_kelamin }}</td>
<td>{{ u.role }}</td>
</tr>
{%
endfor %}
</tbody>
</table>
</div>
{%
endblock %
}

```

8. Membuat templates/cetak-laporan.html

```

<!DOCTYPE html>
<html lang="id">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Cetak Laporan Peminjaman</title>
<style>
body {
    font-family: Arial, sans-serif;
    margin: 20px;
    background-color: #f4f4f4;
}
h1 {

```

```

    text-align: center;
    color: #333;
}
p {
    text-align: center;
    font-size: 1.1em;
    color: #555;
}
table {
    width: 100%;
    border-collapse: collapse;
    margin-top: 20px;
    box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
}
th, td {
    border: 1px solid #ddd;
    padding: 12px;
    text-align: left;
    font-size: 0.9em;
}
th {
    background: linear-gradient(135deg, #4b6cb7, #182848);
    color: white;
}
tr:nth-child(even) {
    background-color: #f9f9f9;
}
tr:hover {
    background-color: #f1f1f1;
}
@media print {
    button {
        display: none;
    }
}

```

```

body {
    margin: 0;
}
}

</style>
</head>
<body>
    <h1>Laporan Peminjaman</h1>
    <p>Periode: {{ tgl_awal }} - {{ tgl_akhir }}</p>
    <table>
        <thead>
            <tr>

                <th>Nama Peminjam</th>
                <th>Jumlah</th>
                <th>Tanggal Pinjam</th>
                <th>Tanggal Kembali</th>
            </tr>
        </thead>
        <tbody>
            {%-for pinjaman in data_laporan %}

            <tr>

                <td>{{ pinjaman.nama_peminjam }}</td>
                <td>{{ pinjaman.jumlah/rupiah }}</td>
                <td>{{ pinjaman.tanggal_pinjam/tanggal_format }}</td>
                <td>{{ pinjaman.tanggal_kembali/tanggal_format }}</td>
            </tr>
            {%-endfor %}

        </tbody>
    </table>
    <script>
        window.print();
    </script>

```

```
</body>
```

```
</html>
```

9. Membuat templates/edit-peminjaman.html

```
{% extends "layouts/layout.html" %}

{% block content %}

<h2>Edit Peminjaman</h2>

<form method="POST">

    Username:<br>
    <input type="text" name="username" value="{{ data.username }}" required><br><br>

    Jumlah (Rp):<br>
    <input type="number" name="jumlah" value="{{ data.jumlah }}" required><br><br>

    Tanggal Pinjam:<br>
    <input type="date" name="tanggal_pinjam" value="{{ data.tanggal_pinjam }}" required><br><br>

    Tanggal Kembali:<br>
    <input type="date" name="tanggal_kembali" value="{{ data.tanggal_kembali }}" required><br><br>

    Status:<br>
    <select name="status">
        <option value="menunggu" {% if data.status == 'menunggu' %}selected{% endif %}>Menunggu</option>
        <option value="disetujui" {% if data.status == 'disetujui' %}selected{% endif %}>Disetujui</option>
        <option value="ditolak" {% if data.status == 'ditolak' %}selected{% endif %}>Ditolak</option>
    </select><br><br>
    <button type="submit">Simpan</button>
</form>

<div style="display: flex; justify-content: center;">
    <a href="{{ url_for('user_dashboard') }}" class="btn">Kembali</a>
</div>
```

```
{% endblock %}
```

10. Membuat templates/edit-profil.html

```
{% extends "layouts/layout.html" %}

{% block content %}

<div class="container">
    <h2>Edit Profil Pengguna</h2>

    <form method="POST">
        <div class="mb-3">
            <label for="nama" class="form-label">Nama Lengkap:</label>
            <input type="text" class="form-control" id="nama" name="nama" value="{{ profile.nama }}" required>
        </div>

        <div class="mb-3">
            <label for="tempat_lahir" class="form-label">Tempat Lahir:</label>
            <input type="text" class="form-control" id="tempat_lahir" name="tempat_lahir" value="{{ profile.tempat_lahir }}" required>
        </div>

        <div class="mb-3">
            <label for="kota" class="form-label">Kabupaten/Kota:</label>
            <input type="text" class="form-control" id="kota" name="kota" value="{{ profile.kota }}" required>
        </div>

        <div class="mb-3">
            <label for="provinsi" class="form-label">Provinsi:</label>
            <input type="text" class="form-control" id="provinsi" name="provinsi" value="{{ profile.provinsi }}" required>
        </div>

        <div class="mb-3">
```

```

<label for="jenis_kelamin" class="form-label">Jenis Kelamin:</label>
<select  class="form-select"  id="jenis_kelamin"  name="jenis_kelamin"
required>
    <option value="">-- Pilih Jenis Kelamin --</option>
    <option  value="Laki-laki"  {% if profile.jenis_kelamin == 'Laki-laki'
%}selected{% endif %}>Laki-laki</option>
    <option  value="Perempuan"  {% if profile.jenis_kelamin == 'Perempuan'
%}selected{% endif %}>Perempuan</option>
</select>
</div>

<div class="mb-3">
    <label for="password" class="form-label">Password Baru:</label>
    <input      type="password"      class="form-control"      id="password"
name="password" value="{{ profile.password }}" required>
</div>

<button type="submit" class="btn btn-primary">Simpan Perubahan</button>
</form>
<div style="display: flex; justify-content: center;">
    <a href="{{ url_for('user_dashboard') }}" class="btn">Kembali</a>
</div>
</div>

{% endblock %}

```

11. Membuat templates/forbidden.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Forbidden</title>
    <style>
        body {

```

```
font-family: sans-serif;
background-color: #f4f4f4;
color: #333;
text-align: center;
padding-top: 100px;
}

h1 {
font-size: 3em;
margin-bottom: 20px;
color: #d32f2f; /* Warna merah yang lebih gelap */
}

p {
font-size: 1.2em;
margin-bottom: 30px;
}

.error-code {
font-size: 5em;
color: #999;
margin-bottom: 20px;
}

.back-link {
color: #007bff;
text-decoration: none;
}

.back-link:hover {
text-decoration: underline;
}

</style>
</head>
```

```

<body>
    <div class="error-code">403</div>
    <h1>Forbidden</h1>
    <p>Anda tidak memiliki izin untuk mengakses halaman ini.</p>
    <a href="/" class="back-link">Kembali ke Beranda</a>
</body>
</html>

```

12. Membuat templates/form-peminjaman.html

```

{% extends "layouts/layout.html" %}
{% block content %}
<h2 style="text-align: center; color: #4CAF50;">Form Peminjaman</h2>

{% with messages = get_flashed_messages(with_categories=true) %}
    {% if messages %}
        {% for category, message in messages %}
            <div class="alert {{ category }}" style="text-align: center;">{{ message }}</div>
        {% endfor %}
    {% endif %}
    {% endwith %}

<div style="max-width: 400px; margin: auto; padding: 20px; border: 1px solid #ccc; border-radius: 10px; background-color: #f9f9f9;">
    <form method="POST" style="display: flex; flex-direction: column;">
        <input type="number" name="jumlah" placeholder="Jumlah Peminjaman" required style="margin-bottom: 10px; padding: 10px; border: 1px solid #ccc; border-radius: 5px;">
        <input type="date" name="tanggal_pinjam" required style="margin-bottom: 10px; padding: 10px; border: 1px solid #ccc; border-radius: 5px;">
        <input type="date" name="tanggal_kembali" required style="margin-bottom: 20px; padding: 10px; border: 1px solid #ccc; border-radius: 5px;">
        <button type="submit" style="padding: 10px; background-color: #4CAF50; color: white; border: none; border-radius: 5px; cursor: pointer;">Ajukan</button>
    </form>
</div>

```

```

</form>
</div>

<div style="display: flex; justify-content: center; margin-top: 20px;">
    <a href="{{ url_for('user_dashboard') }}" class="btn" style="padding: 10px 20px; background-color: #007BFF; color: white; text-decoration: none; border-radius: 5px;">Kembali</a>
</div>
{% endblock %}

```

13. Membuat templates/landing.html

```

<!DOCTYPE html>
<html lang="id">
    <head>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <title>Selamat Datang / Web Peminjaman</title>
        <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
        <link href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0/css/all.min.css" rel="stylesheet">
        <style>
            @import
            url('https://fonts.googleapis.com/css2?family=Poppins:wght@400;600;700&display=swap');

```

*body {
 font-family: 'Poppins', sans-serif;
 background-image:
 url('https://th.bing.com/th/id/R.7f51759d31d74d2f921542d16f1c0c79?rik=rMPU
 8miNfzhCjA&riu=http%3a%2f%2fciumgtips.com%2fwp-
 content%2fuploads%2f2017%2f09%2fPinjaman-
 Uang.jpg&ehk=IVNBvqhkC%2beqsS9%2fmFcLfvxU4Qa5sjC3YaIw3lkTA1s%3d
 &risl=&pid=ImgRaw&r=0');*

```
background-size: cover;  
background-position: center;  
background-repeat: no-repeat;  
min-height: 100vh;  
margin: 0;  
padding: 0;  
}  
  
.navbar {  
background-color: #007bff !important;  
box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);  
}  
  
.navbar-brand {  
color: #fff !important;  
font-weight: 700;  
font-size: 1.5rem;  
}  
  
.nav-buttons .btn-primary {  
background-color: #fff;  
color: #007bff;  
border: 2px solid #fff;  
}  
  
.nav-buttons .btn-secondary {  
background-color: #0056b3;  
color: #fff;  
border: 2px solid #0056b3;  
}  
  
.nav-buttons .btn:hover {  
opacity: 0.9;  
}
```

```
.overlay {  
background: rgba(0, 0, 0, 0.6);  
min-height: 100vh;  
display: flex;  
justify-content: center;  
align-items: center;  
padding-top: 80px;  
}
```

```
.landing-container {  
background-color: #fffffee;  
border-radius: 16px;  
padding: 40px 30px;  
max-width: 600px;  
width: 90%;  
box-shadow: 0 10px 40px rgba(0, 0, 0, 0.3);  
text-align: center;  
}
```

```
.landing-container h1 {  
font-size: 2.5rem;  
font-weight: 700;  
color: #007bff;  
margin-bottom: 20px;  
}
```

```
.landing-container .subtitle {  
font-size: 1.1rem;  
color: #333;  
margin-bottom: 30px;  
}
```

```
feature-box {
```

```
background: #f8f9fa;  
padding: 20px;  
border-radius: 12px;  
margin-bottom: 20px;  
box-shadow: 0 4px 12px rgba(0, 0, 0, 0.05);  
}
```

```
.feature-icon {  
font-size: 2rem;  
color: #007bff;  
margin-bottom: 10px;  
}
```

```
.feature-title {  
font-weight: 600;  
font-size: 1.1rem;  
margin-bottom: 8px;  
}
```

```
.feature-text {  
font-size: 0.95rem;  
color: #555;  
}
```

```
.btn-action {  
margin-top: 20px;  
padding: 10px 25px;  
border-radius: 50px;  
font-weight: 600;  
}
```

```
.footer {  
background-color: #fffffcc;  
text-align: center;
```

```

padding: 15px 0;
font-size: 0.9rem;
color: #555;
}

@media (max-width: 576px) {
.landing-container h1 {
    font-size: 2rem;
}

.landing-container .subtitle {
    font-size: 1rem;
}
}

</style>
</head>
<body>

<!-- Navbar -->
<nav class="navbar navbar-expand-lg fixed-top">
<div class="container">
<a class="navbar-brand" href="#">Pinjam Dulu Seratus</a>
<div class="ms-auto nav-buttons d-none d-lg-flex">
<a href="{{ url_for('login') }}" class="btn btn-primary me-2">
    <i class="fas fa-sign-in-alt me-1"></i> Login
</a>
<a href="{{ url_for('register') }}" class="btn btn-secondary">
    <i class="fas fa-user-plus me-1"></i> Daftar
</a>
</div>
</div>
</nav>

<!-- Landing Content -->

```

```

<div class="overlay">
  <div class="landing-container">
    <h1>Pinjam Dulu Seratus</h1>
    <p class="subtitle">Agar Silaturahmi Tidak Terputus</p>

    <div class="feature-box">
      <div class="feature-icon"><i class="fas fa-bolt"></i></div>
      <div class="feature-title">Cepat & Mudah</div>
      <div class="feature-text">Proses peminjaman yang praktis tanpa syarat ribet.</div>
    </div>

    <div class="feature-box">
      <div class="feature-icon"><i class="fas fa-shield-alt"></i></div>
      <div class="feature-title">Aman & Terpercaya</div>
      <div class="feature-text">Transaksi aman dengan sistem yang teruji.</div>
    </div>

    <div class="feature-box">
      <div class="feature-icon"><i class="fas fa-hand-holding-usd"></i></div>
      <div class="feature-title">Bunga Rendah</div>
      <div class="feature-text">Pinjaman ringan, sesuai kebutuhan.</div>
    </div>

    <a href="#" class="btn btn-outline-primary btn-action">
      <i class="fas fa-info-circle me-2"></i> Pelajari Lebih Lanjut
    </a>
  </div>
</div>

<!-- Footer -->
<footer class="footer">

```

```
<p>&copy; 2025 Web Peminjaman. Semua Hak Dilindungi.</p>
</footer>
```

```
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js
"></script>
</body>
</html>
```

14. Membuat templates/login.html

```
{% extends 'layouts/layout.html' %}

{% block title %}Login - Aplikasi Peminjaman{% endblock %}

{% block content %}
<style>
body {
background:
url('https://th.bing.com/th/id/R.7f51759d31d74d2f921542d16f1c0c79?rik=rMPU
8miNfzhCjA&riu=http%3a%2f%2fciumgtips.com%2fwp-
content%2fuploads%2f2017%2f09%2fPinjaman-
Uang.jpg&ehk=IVNBvqhkC%2beqss9%2fmFcLfvxU4Qa5sjC3YaIw3lkTA1s%3d
&risl=&pid=ImgRaw&r=0');
background-size: cover;
min-height: 100vh;
display: flex;
align-items: center;
justify-content: center;
font-family: 'Poppins', sans-serif;
}

.login-container {
width: 100%;
max-width: 600px; /* Ukuran bingkai */
display: flex;
```

```
border-radius: 100px; /* Ubah menjadi border-radius */
overflow: hidden;
border: none; /* Pastikan tidak ada border */
}

.login-image {
background: rgba(255, 255, 255, 0.8); /* Background semi-transparan */
width: 40%; /* Lebar gambar */
display: flex;
flex-direction: column;
justify-content: center;
align-items: center;
padding: 20px; /* Padding */
color: white;
position: relative;
}

.login-image h2 {
font-size: 2rem; /* Ukuran font */
font-weight: 700;
margin-bottom: 10px;
text-align: center;
color: #007bff; /* Ubah warna teks menjadi biru */
}

.login-image p {
font-size: 1rem; /* Ukuran font */
text-align: center;
line-height: 1.4;
}

.login-form {
background-color: #ffffff;
padding: 30px 20px; /* Padding */
}
```

```
width: 60%; /* Lebar form */
}

.login-card h3 {
    font-weight: 700;
    font-size: 1.8rem; /* Ukuran font */
    color: #007bff;
    margin-bottom: 10px;
}

.login-subtitle {
    color: #777;
    margin-bottom: 40px; /* Margin */
    font-size: 0.9rem; /* Ukuran font */
}

@media (max-width: 992px) {
    .login-container {
        flex-direction: column;
        max-width: 90%; /* Ukuran bingkai untuk layar kecil */
    }
}

.login-image,
.login-form {
    width: 100%;
}

.login-image {
    padding: 100px;
}

</style>

<div class="login-container">
```

```

<div class="login-image">
    <h2>Pinjam Dulu Seratus</h2>
</div>

<div class="login-form">
    <div class="login-card">
        <h3>Selamat Datang</h3>
        <p    class="login-subtitle">Silakan masuk untuk melanjutkan ke aplikasi</p>

        {% if error %}
            <div class="alert alert-danger" role="alert">
                {{ error }}
            </div>
        {% endif %}

        <form method="POST">
            <div class="form-group">
                <input    type="text"    name="username"    class="form-control"
id="username" placeholder=" " required autofocus>
                <label for="username" class="form-label">Username</label>
            </div>

            <div class="form-group">
                <input type="password" name="password" class="form-control"
id="password" placeholder=" " required>
                <label for="password" class="form-label">Password</label>
                <span class="password-toggle" onclick="togglePassword()">
                    <i id="toggleIcon" class="fas fa-eye"></i>
                </span>
            </div>

            <div class="remember-forgot">
                <div class="remember-me">

```

```

<input type="checkbox" id="remember" name="remember">
<label for="remember">Ingat saya</label>
</div>
<a href="#" class="forgot-password">Lupa password?</a>
</div>

<div class="d-grid mb-4">
    <button type="submit" class="btn btn-primary">Masuk</button>
</div>

<div class="divider">
</div>

<div class="text-center">
    <p class="mb-3">Belum punya akun?</p>
    <a href="{{ url_for('register') }}" class="btn btn-register">Daftar
    Akun Baru</a>
    </div>
</form>
</div>
</div>
</div>

<script>
function togglePassword() {
    const passwordInput = document.getElementById('password');
    const toggleIcon = document.getElementById('toggleIcon');

    if (passwordInput.type === 'password') {
        passwordInput.type = 'text';
        toggleIcon.classList.remove('fa-eye');
        toggleIcon.classList.add('fa-eye-slash');
    } else {

```

```

passwordInput.type = 'password';
toggleIcon.classList.remove('fa-eye-slash');
toggleIcon.classList.add('fa-eye');
}

}

document.addEventListener('DOMContentLoaded', function() {
const inputs = document.querySelectorAll('.form-control');

inputs.forEach(input => {
if (input.value !== '') {
input.classList.add('has-value');
}

input.addEventListener('input', function() {
if (this.value !== '') {
this.classList.add('has-value');
} else {
this.classList.remove('has-value');
}
});
});

});
});

</script>
{%- endblock %}

```

15. Membuat templates/register.html

```

<!DOCTYPE html>
<html lang="id">

<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Form Registrasi</title>

```

```

<link
  href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
  rel="stylesheet">
  <link    rel="stylesheet"    href="https://cdnjs.cloudflare.com/ajax/libs/fontawesome/6.0.0/css/all.min.css"
  integrity="sha512-
9usAa10IRO0HhonpyAIVpjrylPvoDwiPUiKdWk5t3PyolY1cOd4DSE0Ga+ri4Au
TroPR5aQvXU9xC6qOPnzFeg= =
crossorigin="anonymous" referrerpolicy="no-referrer" />
<link
  href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap" rel="stylesheet">
<style>
  body {
    background:
      url('https://th.bing.com/th/id/R.7f51759d31d74d2f921542d16f1c0c79?rik=rMPU
8miNfzhCjA&riu=http%3a%2f%2fciumgtips.com%2fwp-
content%2fuploads%2f2017%2f09%2fPinjaman-
Uang.jpg&ehk=IVNBvqhkC%2beqsS9%2fmFcLfvxU4Qa5sjC3YaIw3lkTA1s%3d
&risl=&pid=ImgRaw&r=0');
    background-size: cover;
    min-height: 100vh;
    display: flex;
    align-items: center;
    justify-content: center;
    font-family: 'Poppins', sans-serif;
  }

.registration-container {
  background: rgba(255, 255, 255, 0.95);
  border-radius: 20px;
  padding: 40px;
  box-shadow: 0 15px 40px rgba(0, 0, 0, 0.2);
  width: 100%;
}

```

```
    max-width: 500px;
    transition: transform 0.3s;
}

.registration-container:hover {
    transform: scale(1.02);
}

h3 {
    text-align: center;
    margin-bottom: 30px;
    color: #007bff;
    font-weight: 600;
}

form-group label {
    font-weight: 500;
    color: #333;
    margin-bottom: 10px;
}

form-control {
    border-radius: 10px;
    border: 1px solid #ced4da;
    transition: border-color 0.3s;
}

form-control:focus {
    border-color: #007bff;
    box-shadow: 0 0 5px rgba(0, 123, 255, 0.5);
}

.btn-primary {
    background: linear-gradient(45deg, #007bff, #00c6ff);
```

```
border: none;  
font-weight: 600;  
padding: 14px;  
border-radius: 10px;  
transition: all 0.3s ease;  
font-size: 1.1rem;  
letter-spacing: 0.5px;  
margin-top: 10px;  
}  
  
.btn-primary:hover {  
background: linear-gradient(45deg, #00549c, #00b8f0);  
}  
  
.btn-link {  
color: #007bff;  
}  
  
.btn-link:hover {  
color: #00c6ff;  
}  
  
.text-center {  
margin-top: 20px;  
}  
  
footer {  
text-align: center;  
margin-top: 30px;  
font-size: 0.9rem;  
color: #555;  
}  
</style>  
</head>
```

```

<body>
    <div class="registration-container">
        <h3>Registrasi Pengguna Baru</h3>
        <form method="POST" action="{{ url_for('register') }}">
            <div class="form-group">
                <label for="username">Username</label>
                <input type="text" class="form-control" id="username"
name="username" placeholder="Masukkan username" required>
            </div>

            <div class="form-group">
                <label for="password">Password</label>
                <input type="password" class="form-control" id="password"
name="password" placeholder="Masukkan password" required>
            </div>

            <div class="form-group">
                <label for="email">Email</label>
                <input type="email" class="form-control" id="email" name="email"
placeholder="Masukkan email" required>
            </div>

            <button type="submit" class="btn btn-primary btn-block">
                <i class="fas fa-user-plus me-2"></i>
                Daftar
            </button>
            <div class="text-center">
                Sudah punya akun?
                <a href="{{ url_for('login') }}" class="btn btn-link">
                    Login
                    <i class="fas fa-sign-in-alt ms-1"></i>
                </a>
            </div>
        </form>
    </div>

```

```

</form>
<div class="footer">
    &copy; 2023 Aplikasi Peminjaman. Semua hak dilindungi.
</div>
</div>

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"
"></script>
</body>

</html>

```

16. Membuat templates/user-dashboard.html

```

{% extends "layouts/layout.html" %}

{% block title %}Dashboard{% endblock %}
{% block content_title %}Dashboard{% endblock %}

{% block content %}
<h2 class="mt-4">Selamat datang, {{ nama }}!</h2>

{% with messages = get_flashed_messages(with_categories=true) %}
    {% if messages %}
        {% for category, message in messages %}
            <div class="alert alert-{{ category }}">{{ message }}</div>
        {% endfor %}
    {% endif %}
    {% endwith %}

<div class="text-center">
    <a href="{{ url_for('form_peminjaman') }}" class="btn btn-primary">Ajukan
    Peminjaman Baru</a>
    <a href="{{ url_for('verifikasi') }}" class="btn btn-info">Verifikasi
    Biodata</a>

```

```

<a href="{{ url_for('edit_profile') }}" class="btn btn-secondary">Edit
Profil</a>
</div>

<h3 class="mt-4">Riwayat Peminjaman</h3>
<div class="table-responsive">
<table class="table table-bordered table-striped">
<thead class="thead-dark">
<tr>
<th>No</th>
<th>Jumlah</th>
<th>Tanggal Pinjam</th>
<th>Tanggal Kembali</th>
<th>Status</th>
</tr>
</thead>
<tbody>
{% for item in data %}
<tr>
<td>{{ loop.index }}</td>
<td>{{ item.jumlah | rupiah }}</td>
<td>{{ item.tanggal_pinjam | tanggal_format }}</td>
<td>{{ item.tanggal_kembali | tanggal_format }}</td>
<td>{{ item.status }}</td>
</tr>
{% endfor %}
{% if not data %}
<tr><td colspan="5" class="text-center">Belum ada data
peminjaman.</td></tr>
{% endif %}
</tbody>
</table>
<p><strong>Total Peminjaman:</strong> {{ total | rupiah }}</p>
</div>

```

```

<div class="text-center mt-4">
    <a href="{{ url_for('logout') }}" class="btn btn-danger">Logout</a>
</div>
{% endblock %}

```

17. Membuat templates/verifikasi-biodata.html

```

{% extends "layouts/layout.html" %}
{% block content %}

<div class="container">
    <h2 class="text-center mb-4">Lengkapi Biodata & Upload Foto</h2>
    <p class="text-center">Anda harus melengkapi biodata dan mengunggah foto sebelum dapat mengakses dashboard.</p>

    <h4 class="mt-4">Status Biodata</h4>
    <div class="table-responsive">
        <table class="table table-bordered">
            <thead>
                <tr>
                    <th>Field</th>
                    <th>Status</th>
                </tr>
            </thead>
            <tbody>
                <tr>
                    <td>Nama</td>
                    <td>{{ '✓' if profile.nama else '✗' }}</td>
                </tr>
                <tr>
                    <td>Tempat Lahir</td>
                    <td>{{ '✓' if profile.tempat_lahir else '✗' }}</td>
                </tr>
                <tr>

```

```

<td>Kabupaten/Kota</td>
<td>{{ '✓' if profile.kota else '✗' }}</td>
</tr>
<tr>
    <td>Provinsi</td>
    <td>{{ '✓' if profile.provinsi else '✗' }}</td>
</tr>
<tr>
    <td>Jenis Kelamin</td>
    <td>{{ '✓' if profile.jenis_kelamin else '✗' }}</td>
</tr>
<tr>
    <td>Foto Profil</td>
    <td>
        {% if profile.foto %}
            ✓ <br>
        {% else %}
            ✗
        {% endif %}
    </td>
</tr>
</tbody>
</table>
</div>
<div class="text-center">
    <a href="{{ url_for('edit_profile') }}" class="btn btn-primary">
        <i class="fas fa-edit me-2"></i>
        Edit Biodata
    </a>
</div>

```

```

<hr class="my-4">

<h4 class="mt-4">Upload Foto Profil</h4>
<form      method="POST"      enctype="multipart/form-data"      action="{{
url_for('upload_foto') }}">
<div class="mb-3">
    <label for="foto" class="form-label">Pilih File Foto</label>
    <input   class="form-control"   type="file"   name="foto"   id="foto"
accept="image/*" required>
</div>
<div class="text-center">
    <button type="submit" class="btn btn-success">
        <i class="fas fa-upload me-2"></i>
        Upload
    </button>
    <a href="{{ url_for('user_dashboard') }}" class="btn btn-secondary">
        <i class="fas fa-arrow-left me-2"></i>
        Kembali
    </a>
</div>
</form>
</div>

{% endblock %}

```

18. Membuat static/css/admin.css

```

body {
    font-family: 'Arial', sans-serif,
    background-color: #f4f7fa;
    color: #333;
}

#sidebar {
    background-color: #007bff;
    position: fixed; /* Make sidebar fixed */
    height: 100%; /* Full height */
}

```

```

    overflow-y: auto; /* Enable scrolling if needed */
}

.nav-link {
    color: #ffffff;
}

.nav-link:hover {
    background-color: #0056b3;
}

.active {
    background-color: #0056b3;
}

.main-content {
    margin-left: 250px; /* Adjust margin to fit sidebar */
    padding: 20px; /* Add padding for better spacing */
}

.card {
    margin-top: 20px;
    border-radius: 10px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
}

.card-header {
    background-color: #007bff;
    color: white;
    border-top-left-radius: 10px;
    border-top-right-radius: 10px;
}

.form-control {
    border-radius: 5px;
    box-shadow: inset 0 1px 2px rgba(0, 0, 0, 0.1);
}

.btn-primary {
    background-color: #28a745;
    border: none;
    border-radius: 5px;
}

```

```

        }
        .btn-primary:hover {
            background-color: #218838;
        }
        @media (max-width: 768px) {
            #sidebar {
                position: static; /* Reset for smaller screens */
                height: auto; /* Reset height */
            }
            .main-content {
                margin-left: 0; /* Reset margin on smaller screens */
            }
        }
    }
}

```

19. Membuat static/css/register.css

```

body {
    background-color: #f8f9fa;
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
}

.registration-container {
    max-width: 600px;
    margin: 50px auto;
    background-color: #fff;
    padding: 30px;
    border-radius: 15px;
    box-shadow: 0 0 30px rgba(0, 0, 0, 0.1);
}

h3 {
    font-size: 2.5rem;
    font-weight: 700;
    color: #007bff;
    margin-bottom: 20px;
    text-align: center;
}

```

```
}
```

```
.form-group {  
    margin-bottom: 20px;  
}
```

```
label {  
    font-size: 1.1rem;  
    font-weight: 600;  
    color: #343a40;  
    margin-bottom: 8px;  
    display: block;  
}
```

```
.form-control {  
    border-radius: 8px;  
    padding: 12px 15px;  
    font-size: 1rem;  
    border: 1px solid #ced4da;  
    transition: all 0.3s ease;  
}
```

```
.form-control:focus {  
    border-color: #007bff;  
    box-shadow: 0 0 0 0.2rem rgba(0, 123, 255, 0.25);  
}
```

```
.form-check-inline {  
    margin-right: 20px;  
}
```

```
.form-check-input {  
    margin-top: 0.4rem;  
}
```

```
.btn-primary {  
    background-color: #007bff;  
    border-color: #007bff;  
    padding: 12px 30px;  
    font-size: 1.1rem;  
    font-weight: 600;  
    border-radius: 8px;  
    transition: all 0.3s ease;  
}  
  
.btn-primary:hover {  
    background-color: #0056b3;  
    border-color: #0056b3;  
    transform: translateY(-2px);  
    box-shadow: 0 4px 10px rgba(0, 0, 0, 0.2);  
}  
  
.btn-link {  
    color: #6c757d;  
    font-size: 1rem;  
    font-weight: 500;  
    transition: all 0.3s ease;  
    text-decoration: none;  
}  
  
.btn-link:hover {  
    color: #0056b3;  
    text-decoration: underline;  
    transform: translateY(-1px);  
}  
  
/* Responsive adjustments */  
@media (max-width: 768px) {
```

```
.registration-container {  
    padding: 20px;  
}  
  
h3 {  
    font-size: 2rem;  
}  
  
.form-control,  
.btn {  
    font-size: 1rem;  
}  
}  
  
@media (max-width: 576px) {  
    .registration-container {  
        padding: 15px;  
    }  
  
    h3 {  
        font-size: 1.8rem;  
    }  
  
.form-control,  
.btn {  
    font-size: 0.9rem;  
}  
}
```

20. Membuat static/css/style.css

```
/* Reset dan font dasar */
body {
    margin: 0;
    padding: 0;
    font-family: 'Segoe UI', sans-serif;
    background-color: #f2f4f8;
    color: #333;
}

/* Container utama */
.container {
    max-width: 900px;
    margin: auto;
    padding: 25px;
    background-color: #ffffff;
    border-radius: 12px;
    box-shadow: 0 0 12px rgba(0, 0, 0, 0.08);
}

/* Heading */
h1, h2, h3 {
    text-align: center;
    color: #2c3e50;
}

/* Formulir */
form {
    display: flex;
    flex-direction: column;
    gap: 12px;
    margin-top: 20px;
}
```

```
form input, form select, form textarea {  
    padding: 10px;  
    font-size: 1rem;  
    border: 1px solid #ccc;  
    border-radius: 6px;  
    width: 100%;  
}  
  
form button {  
    padding: 10px;  
    font-size: 1rem;  
    background-color: #3498db;  
    border: none;  
    border-radius: 6px;  
    color: white;  
    cursor: pointer;  
}  
  
form button:hover {  
    background-color: #2980b9;  
}  
  
/* Tabel */  
table {  
    width: 100%;  
    border-collapse: collapse;  
    margin-top: 20px;  
    background-color: #fff;  
    border-radius: 8px;  
    overflow: hidden;  
}  
  
table th, table td {  
    padding: 12px;
```

```
border-bottom: 1px solid #e0e0e0;
text-align: left;
}






```

```
font-weight: bold;
}

.btn-dashboard {
  display: inline-block;
  margin-top: 12px;
  padding: 10px 15px;
  background-color: #2e85cc;
  color: rgb(255, 255, 255);
  text-decoration: none;
  border-radius: 6px;
  font-weight: bold;
  position: relative;
}

.btn:hover {
  background-color: #27ae60;
}

/* Responsive */

@media (max-width: 768px) {
  .container {
    padding: 15px;
  }

  table th, table td {
    font-size: 0.9rem;
  }
}

form input, form select, form button {
  font-size: 0.9rem;
}

/* Sidebar */
```

```

.sidebar {
    position: fixed;
    top: 0;
    bottom: 0;
    left: 0;
    z-index: 100; /* Behind the navbar */
    padding: 48px 0 0; /* Height of navbar */
    box-shadow: 0 0.125rem 0.25rem rgba(0, 0, 0, 0.08); /* Efek shadow tipis */
    background-color: #f8f9fa; /* Warna latar belakang sidebar */
}

.sidebar .nav-link {
    font-weight: 500;
    color: #495057; /* Warna teks menu */
    padding: 0.75rem 1rem; /* Padding menu */
}

.sidebar .nav-link i {
    margin-right: 0.5rem; /* Jarak ikon dan teks */
    color: #6c757d; /* Warna ikon */
}

.sidebar .nav-link.active {
    color: #007bff; /* Warna teks menu aktif */
    background-color: rgba(0, 123, 255, 0.1); /* Latar belakang menu aktif */
}

.sidebar .nav-link:hover {
    color: #007bff; /* Warna teks menu saat dihover */
    background-color: rgba(0, 123, 255, 0.05); /* Latar belakang menu saat dihover */
}

.sidebar-heading {

```

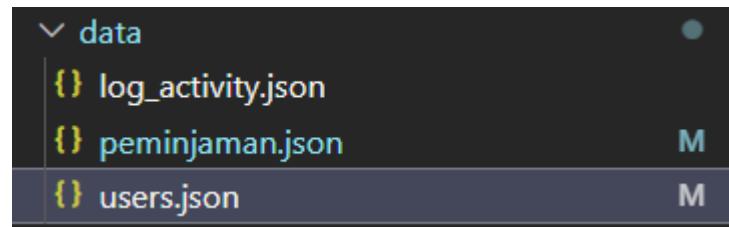
```
font-size: 0.75rem;
text-transform: uppercase;
color: #6c757d; /* Warna teks heading */
}

/* Main Content */
main {
    padding-top: 20px; /* Sesuaikan dengan tinggi navbar */
    background-color: #fff; /* Warna latar belakang main content */
}

/* Tambahan untuk border-bottom */
.border-bottom {
    border-bottom: 1px solid #dee2e6 !important;
}
```

D. Membuat database

Untuk database nya itu sudah dibuat otomatis oleh app.py nya sendiri dan akan disimpan dalam data



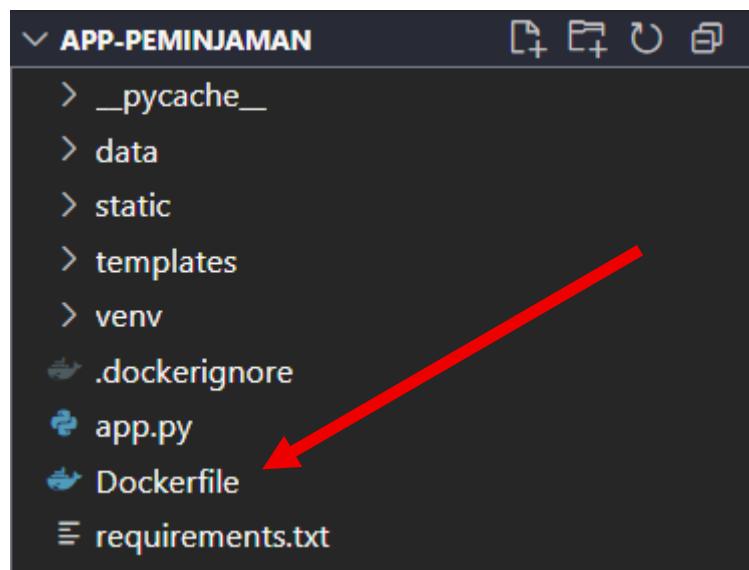
Gambar 1 2 databases

F. Membangun docker dalam program app peminjaman

Pada kasus ini, kami menggunakan situs web peminjaman yang telah kami buat bersama. Untuk memasukkan program ke dalam container Docker, ikuti langkah-langkah berikut:

1. Buat Dockerfile

Buat dockerfile didalam program web peminjaman



Gambar 1 3 Membuat Dockerfile didalam Program app-peminjaman

2. Membuat requirements.txt

Flask

Flask-Login

Werkzeug

3. Kode program yang terdapat pada file Dockerfile.

```
# Gunakan image dasar Python
FROM python:3.9-slim-buster

# Set working directory di dalam container
WORKDIR /app

# Salin requirements.txt dan instal dependensi
COPY requirements.txt .

RUN pip install --no-cache-dir -r requirements.txt

# Salin seluruh kode aplikasi
COPY ..

# Set variabel lingkungan
ENV FLASK_APP=app.py
ENV FLASK_ENV=production

# Port yang diekspos
EXPOSE 5000

# Perintah untuk menjalankan aplikasi
CMD ["flask", "run", "--host=0.0.0.0"]
```

4. Penjelasan kode program

- a. *FROM python:3.9-slim-buster*

Menggunakan image dasar Python 3.9 yang ringan (slim) sebagai fondasi untuk aplikasi.

b. WORKDIR /app

Menentukan direktori kerja di dalam container. Semua perintah selanjutnya akan dijalankan di dalam direktori ini.

c. COPY requirements.txt .

d. RUN pip install --no-cache-dir -r requirements.txt

Menyalin file requirements.txt ke dalam container dan menginstal semua dependensi yang diperlukan untuk aplikasi Flask.

e. COPY ..

Menyalin seluruh kode aplikasi dari direktori lokal ke dalam container.

f. ENV FLASK_APP=app.py

g. ENV FLASK_ENV=production

Mengatur variabel lingkungan yang diperlukan oleh Flask. FLASK_APP menunjukkan file utama aplikasi, sedangkan FLASK_ENV diatur ke production untuk mode produksi.

h. EXPOSE 5000

Mengekspos port 5000, yang merupakan port default untuk aplikasi Flask.

i. CMD ["flask", "run", "--host=0.0.0.0"]

Perintah ini menjalankan aplikasi Flask ketika container dimulai, membuatnya tersedia untuk menerima permintaan dari luar.

5. Build container

a. docker ps

Untuk melihat daftar container Docker yang sedang berjalan.

```
PS E:\AJRA\S4\Komputasi Awan\App-Peminjaman\app-peminjaman> docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS               NAMES
```

Gambar 1 4 tampilan docker container yang kosong

b. docker build -t app-peminjaman:1.0 .

```
[+] Building 12.4s (11/11) FINISHED
--> [internal] load build definition from Dockerfile          docker:desktop-linux
--> [internal] transfer Dockerfile: 52B                         0.0s
--> [internal] load metadata for docker.io/library/python:3.9-slim-buster   0.0s
--> [auth] library/python/pull token for registry-1.docker.io    0.0s
--> [internal] load .dockerignore                                0.0s
--> [internal] transfer context: 998                            0.0s
--> [1/5] FROM docker.io/library/python:3.9-slim-buster@sha256:328a7a4250aba4249f458877adecf92ee88dc6abd2d76dc5c8f01cac9b53998 0.1s
--> [2/5] RUN pip install --no-cache-dir -r requirements.txt    7.48s
--> [3/5] COPY requirements.txt .                               0.0s
--> [4/5] RUN pip install --no-cache-dir -r requirements.txt    7.8s
--> [5/5] COPY . .                                         0.0s
--> [internal] export image                                     0.0s
--> [internal] export layers                                    0.0s
--> [internal] writing image sha256:2e12f060da377fe391ba2ab8963db264d6689f5d3acbfbb333b8514a1bd6 0.0s
--> [internal] naming to docker.io/library/app-peminjaman:1.0  0.0s
View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/0zzdjkav06dwta5yurcun
```

Gambar 1 5 docker berhasil di buat

c. docker images

| REPOSITORY | TAG | IMAGE ID | CREATED | SIZE |
|----------------|-----|--------------|--------------------|-------|
| app-peminjaman | 1.0 | 2e12f060da37 | About a minute ago | 134MB |
| fidk/komputasi | 1.0 | 45672059bd77 | 4 days ago | 137MB |

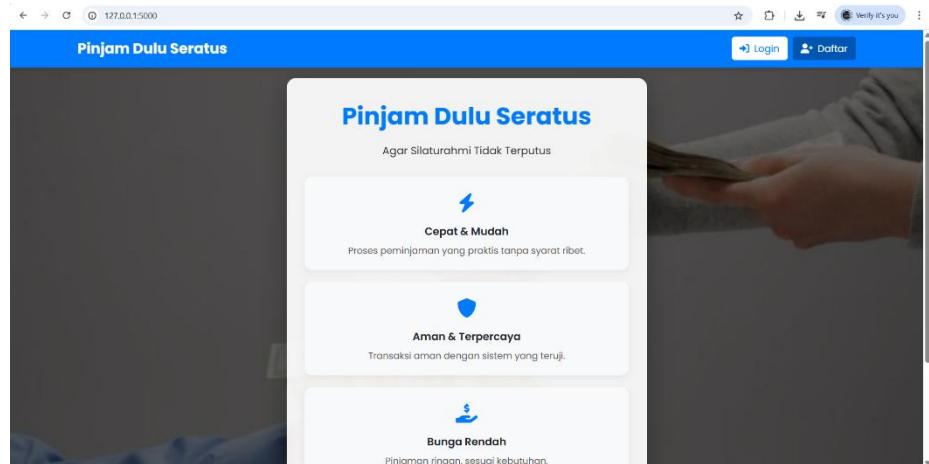
Gambar 1 6 tampilan docker images yang telah dibuat

d. docker run -d -p 5000:5000 app-peminjaman:1.0

```
PS E:\AJRA\S4\Komputasi Awan\App-Peminjaman\app-peminjaman> docker run -d -p 5000:5000 app-peminjaman:1.0
1ac30a890549327bdde3a4cda612aea79275cb49f7c69cb445158c3b5807ca8c
```

Gambar 1 7 container id untuk container yang sedang berjalan.

e. tampilan app untuk 127.0.0.1:5000



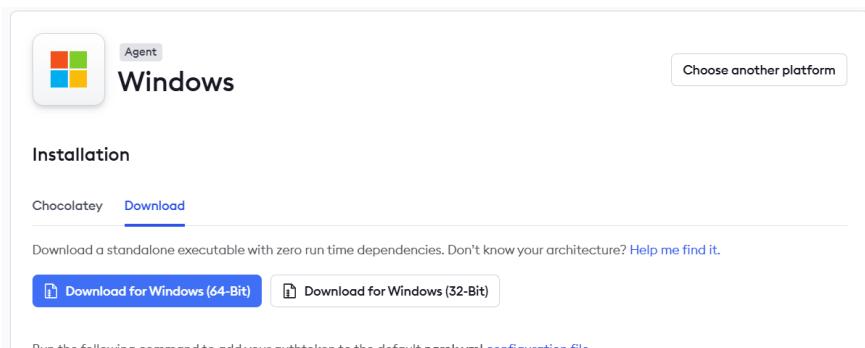
Gambar 1 8 tampilan app setelah docker dijalankan

6. Jalankan docker dan ngrok

Setelah docker dijalankan, install terlebih dahulu ngrok nya

a) Install ngrok windows/linux

Pergi ke web resmi ngrok kemudian login dan ikuti dokumentasi untuk download nya



Gambar 1 9 intall ngrok

b) Setelah install

Run the following command to add your auth token to the default `ngrok.yml` configuration file.

```
ngrok config add-authToken 2xS2t60bCKw1Qt3n9LbZ4UGvkf9_6PVt27vgZyNnj5n7Dg8Q
```



Gambar 1 10 auth token ngrok

c) jalankan ngrok

```
I>ngrok http http://localhost:5000
```

Gambar 1 12 ngrok run

untuk portnya harus di sesuaikan dengan docker setelah itu maka akan diberikan ip

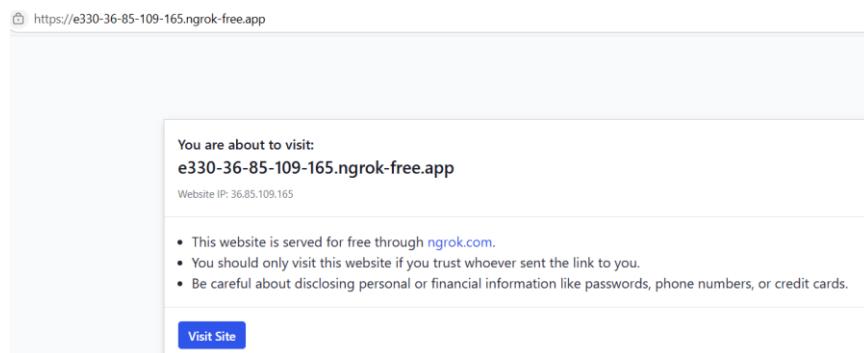
```
ngrok
👉 Load balance anything, anywhere with Endpoint Pools! https://ngrok.com/r/pools

Session Status      online
Account            ajrazm (Plan: Free)
Version             3.22.1
Region              Asia Pacific (ap)
Latency             49ms
Web Interface      http://127.0.0.1:4040
Forwarding          https://e330-36-85-109-165.ngrok-free.app -> http://localhost:5000

Connections        ttl     opn     rtt      rt5      p50      p90
                  0       0       0.00    0.00    0.00    0.00
```

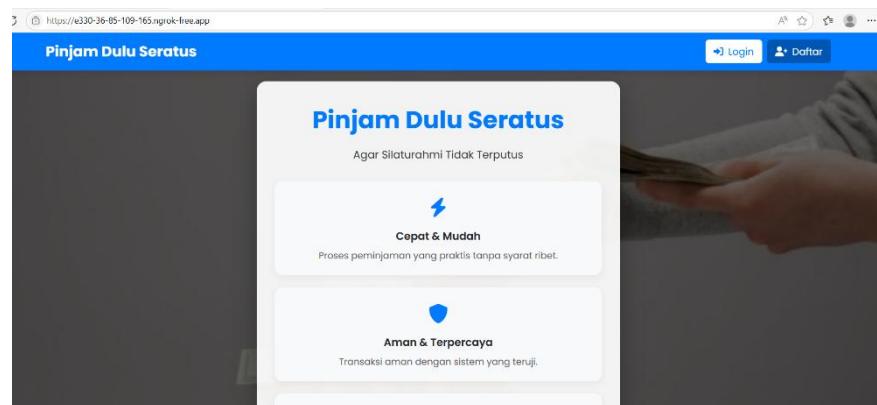
Gambar 1 11 ip ngrok

klik ip tersebut nanti akan di arahkan kesebuah link



Gambar 1 13 link dibagikan ngrok

visit site kemudian akan tampil app-peminjaman yang telah dibuat



Gambar 1 14 tampilan app peminjaman

link tersebut dapat dibagikan dan digunakan juga oleh pemilik link tersebut.

BAB III

PENUTUP

A. Kesimpulan

Praktikum pembuatan aplikasi peminjaman berbasis web dengan Flask dan Docker ini memberikan pemahaman mendalam tentang bagaimana mengembangkan dan mengelola aplikasi dengan lingkungan yang terisolasi serta mudah untuk didistribusikan. Aplikasi ini berhasil dibangun dengan fitur lengkap, seperti login, registrasi, verifikasi biodata, form peminjaman, serta dashboard untuk pengguna dan admin.

Dengan memanfaatkan Docker, aplikasi dapat dijalankan secara konsisten di berbagai sistem operasi tanpa harus mengatur lingkungan secara manual. Praktikum ini juga memberikan pengalaman nyata dalam pengelolaan data menggunakan file JSON dan penggunaan template HTML untuk antarmuka pengguna.

Secara keseluruhan, praktikum ini memperkuat keterampilan teknis dalam pengembangan web dan DevOps dasar, serta menumbuhkan pemahaman tentang arsitektur aplikasi yang modular dan efisien.