

# **DESAIN SISTEM INFORMASI INVENTORY KAMPUS BERBASIS WEB PADA KAMPUS MENGGUNAKAN FRAMEWORK LARAVEL**

**SOFTWARE DESIGN : 1.0**

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**PROGRAM STUDI METODOLOGI DESAIN PERANGKAT LUNAK  
PRAKTIK  
FAKULTAS SAINS DAN TEKNOLOGI  
UNIVERSITAS TEKNOLOGI YOGYAKARTA  
YOGYAKARTA  
2021**

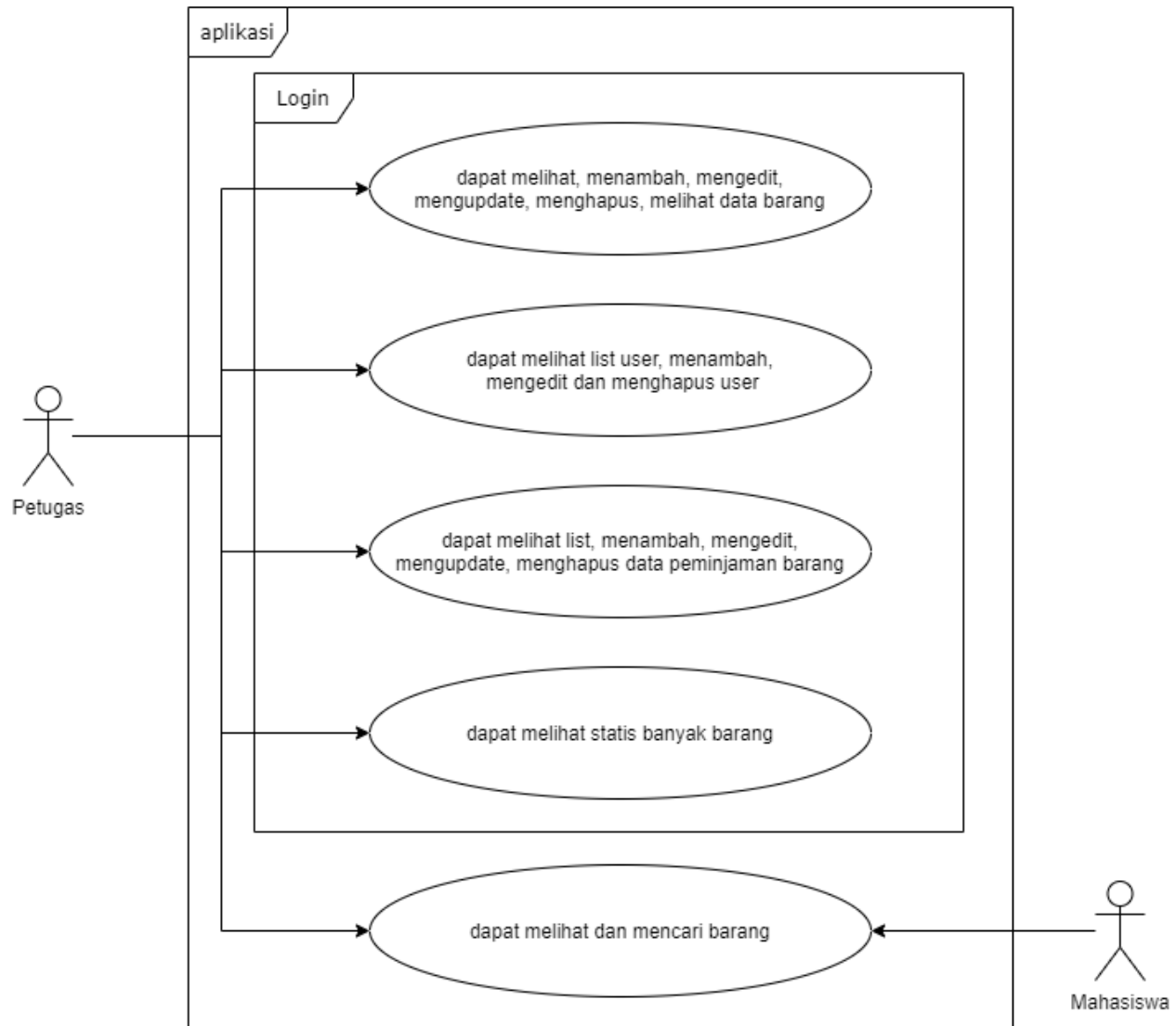
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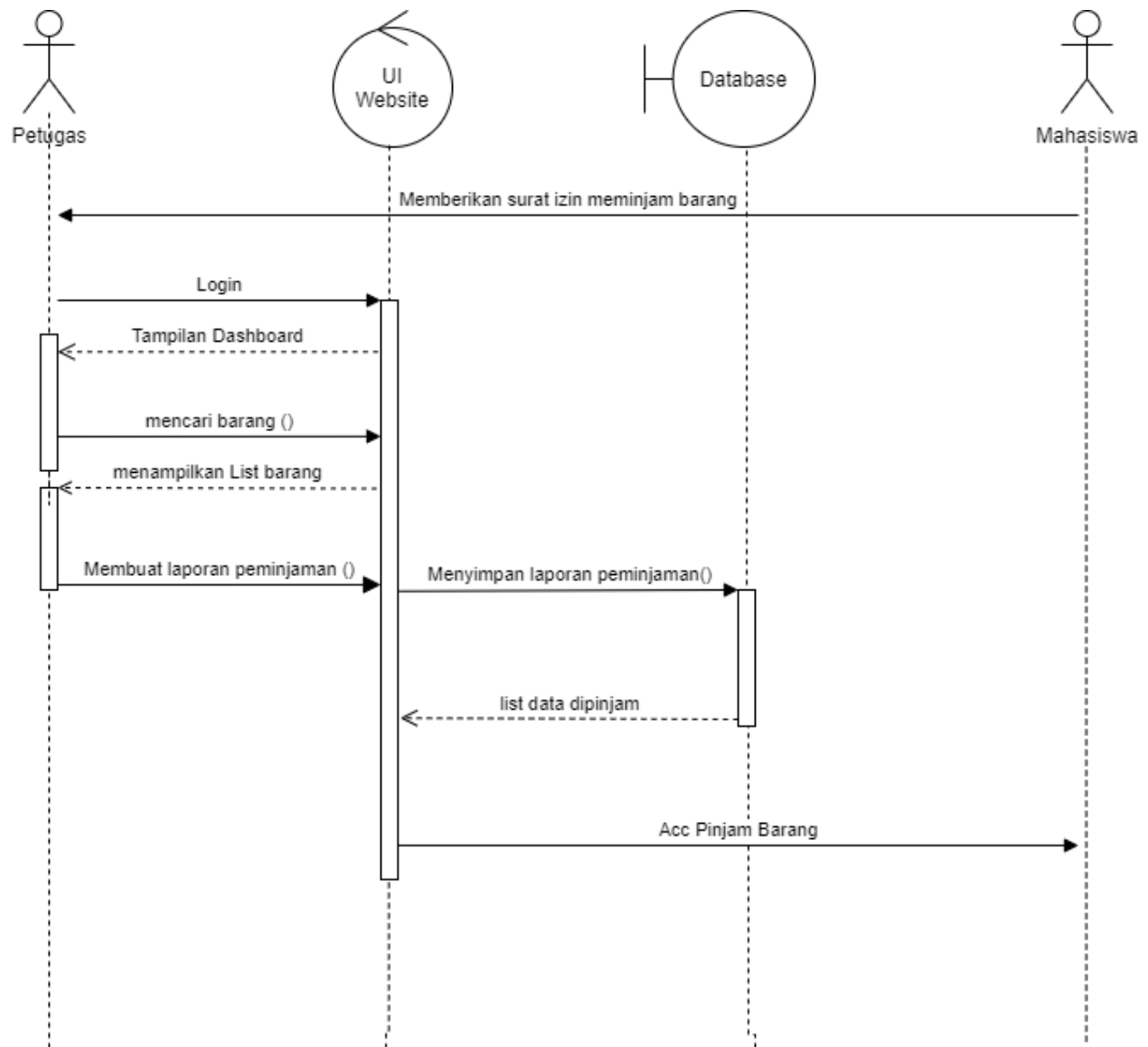
## 1 MODEL DATA

Model data digunakan untuk menjelaskan bagaimana aplikasi bekerja. Analisis ini dilakukan agar kebutuhan aplikasi berbasis website ini dapat diketahui lebih baik sehingga proses perancangan dan pembangunan sistem dapat berjalan dengan baik. Analisis pada bagian ini akan digambarkan dalam Unified Modeling Language (UML) yang menghasilkan use case diagram, sequence diagram dan class diagram.

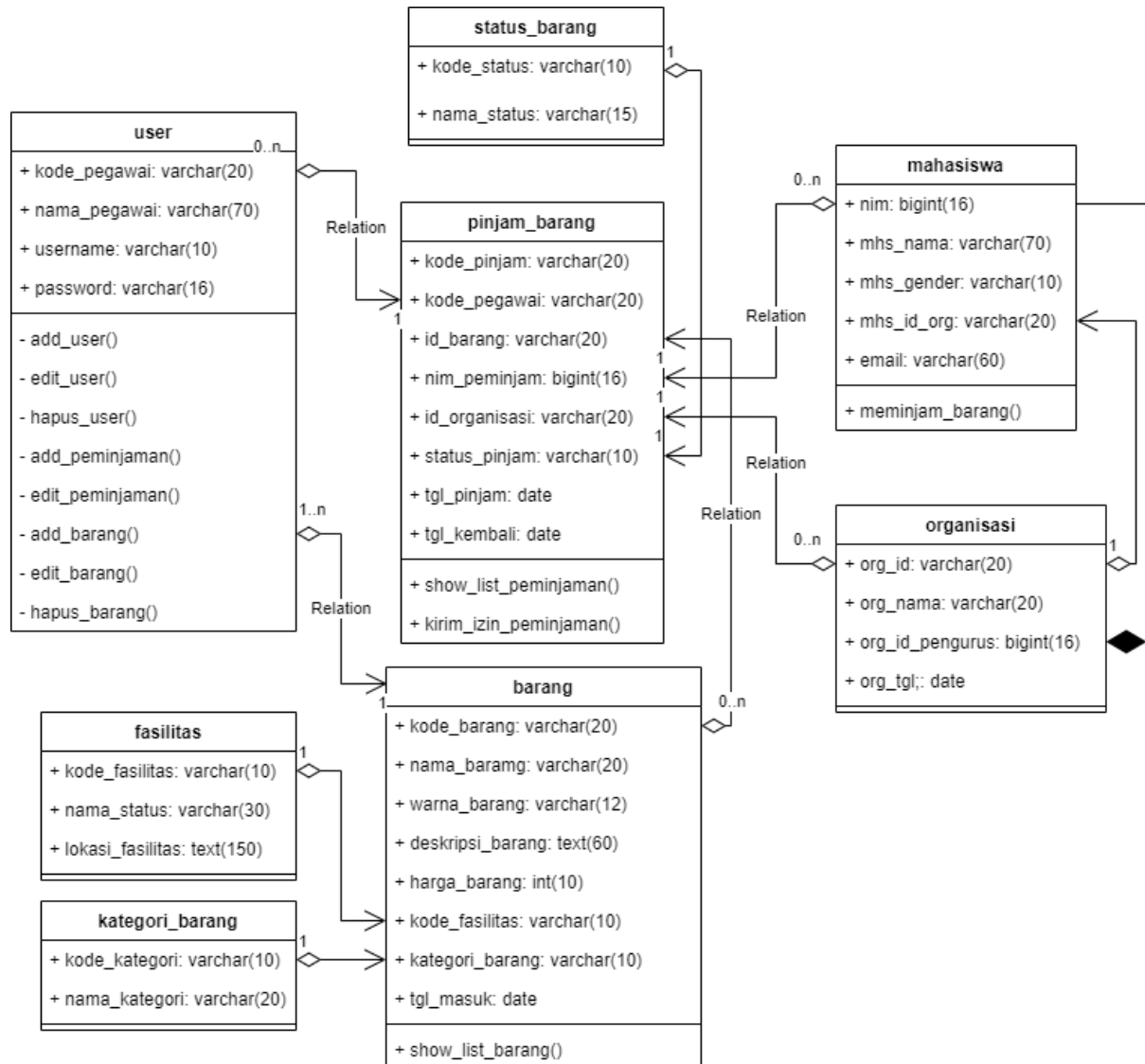
### 1.1 Use Case Diagram



## 1.2 Sequence Diagram



### 1.3 Class Diagram



## 2 RANCANGAN TABEL

| user         |           |        |          |                        |
|--------------|-----------|--------|----------|------------------------|
| Nama Field   | Tipe Data | Ukuran | Key      | Keterangan             |
| kode_pegawai | varchar   | 20     | Primary  | Kode Pegawai / petugas |
| nama_pegawai | varchar   | 70     | Not null | Nama lengkap pegawai   |
| username     | varchar   | 10     | Not null | username pegawai       |
| Password     | varchar   | 16     | Not null | password login         |

| tabel_organisasi |
|------------------|
|------------------|

| Nama Field      | Tipe Data | Ukuran | Key      | Keterangan                    |
|-----------------|-----------|--------|----------|-------------------------------|
| org_id          | varchar   | 20     | Primary  | id organisasi kampus          |
| org_nama        | varchar   | 70     | Not null | nama organisasi kampus        |
| org_id_pengurus | bigint    | 16     | Foreign  | id pengurus organisasi kampus |
| org_tgl         | date      |        | Not null | tgl organisasi kampus         |

| tabel_mahasiswa |           |        |                    |  |
|-----------------|-----------|--------|--------------------|--|
| Nama Field      | Tipe Data | Ukuran | Key                | Keterangan                                 |
| mhs_nim (pk)    | bigint    | 16     | Primary            | nim mahasiswa                              |
| mhs_nama        | varchar   | 70     | Not null           | nama mahasiswa                             |
| mhs_gender      | varchar   | 10     | Not null           | gender mahasiswa                           |
| mhs_id_org      | varchar   | 20     | Foreign + Nullable | id organisasi yang dimasuki oleh mahasiswa |
| email           | varchar   | 60     | Not null           | Email student mahasiswa                    |

| tabel_pinjam       |           |        |          |                                   |
|--------------------|-----------|--------|----------|-----------------------------------|
| Nama Field         | Tipe Data | Ukuran | Key      | Keterangan                        |
| kode_pinjam (pk)   | varchar   | 20     | Primary  | kode peminjaman barang            |
| id_barang (fk)     | varchar   | 20     | Foreign  | id barang yang dipinjam           |
| nim_peminjam (fk)  | bigint    | 16     | Foreign  | nim si peminjam barang            |
| id_organisasi (fk) | varchar   | 20     | Foreign  | id organisasi yang meminjam       |
| status_barang (fk) | varchar   | 10     | Foreign  | kode status status                |
| Tgl_pinjam         | date      |        | Not null | Tanggal barang dipinjam           |
| Tgl_kembali        | date      |        | Not null | Tanggal barang harus dikembalikan |

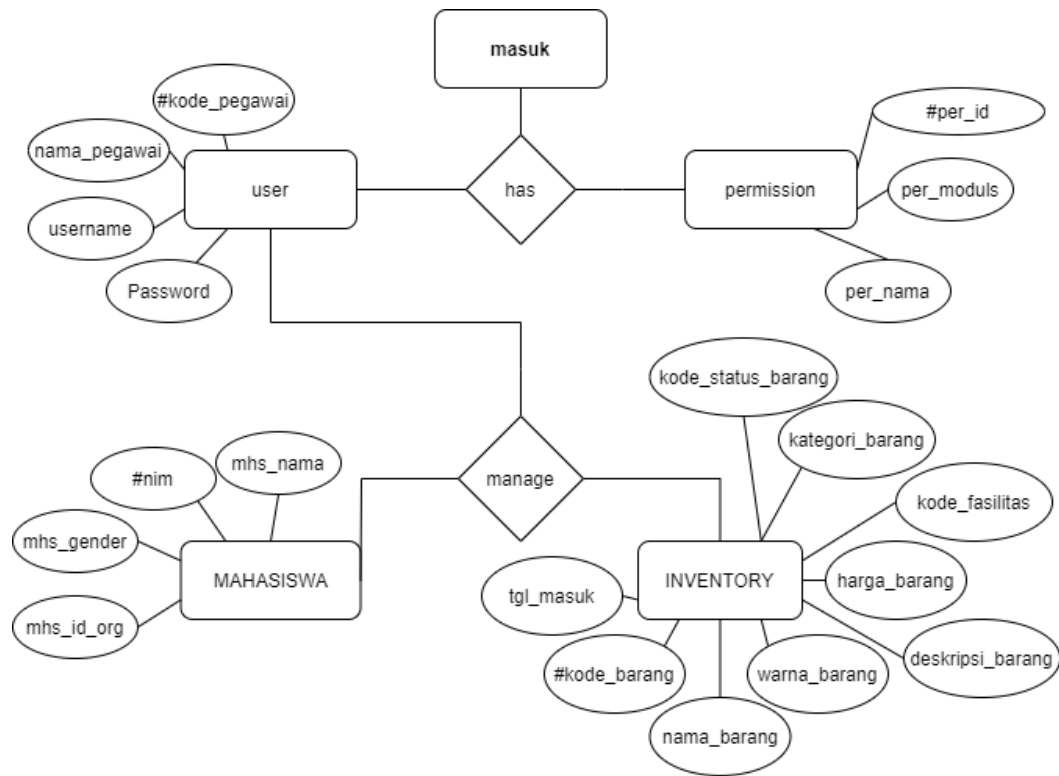
| kategori_barang    |           |        |          |                      |
|--------------------|-----------|--------|----------|----------------------|
| Nama Field         | Tipe Data | Ukuran | Key      | Keterangan           |
| kode_kategori (pk) | varchar   | 10     | Primary  | kode kategori barang |
| nama_kategori      | varchar   | 20     | Not null | nama kategori barang |

| status_barang    |           |        |          |                    |
|------------------|-----------|--------|----------|--------------------|
| Nama Field       | Tipe Data | Ukuran | Key      | Keterangan         |
| kode_status (pk) | varchar   | 10     | Primary  | kode status barang |
| nama_status      | varchar   | 15     | Not null | status barang      |

| fasilitas           |           |        |          |   |
|---------------------|-----------|--------|----------|---|
| Nama Field          | Tipe Data | Ukuran | Key      | Keterangan                                      |
| kode_fasilitas (pk) | varchar   | 10     | Primary  | kode fasilitas dimana barang disimpan           |
| nama_fasilitas      | varchar   | 30     | Not null | nama fasilitas tempat barang berada             |
| lokasi_fasilitas    | text      | 150    | Not null | lokasi fasilitas sekaligus tempat barang berada |

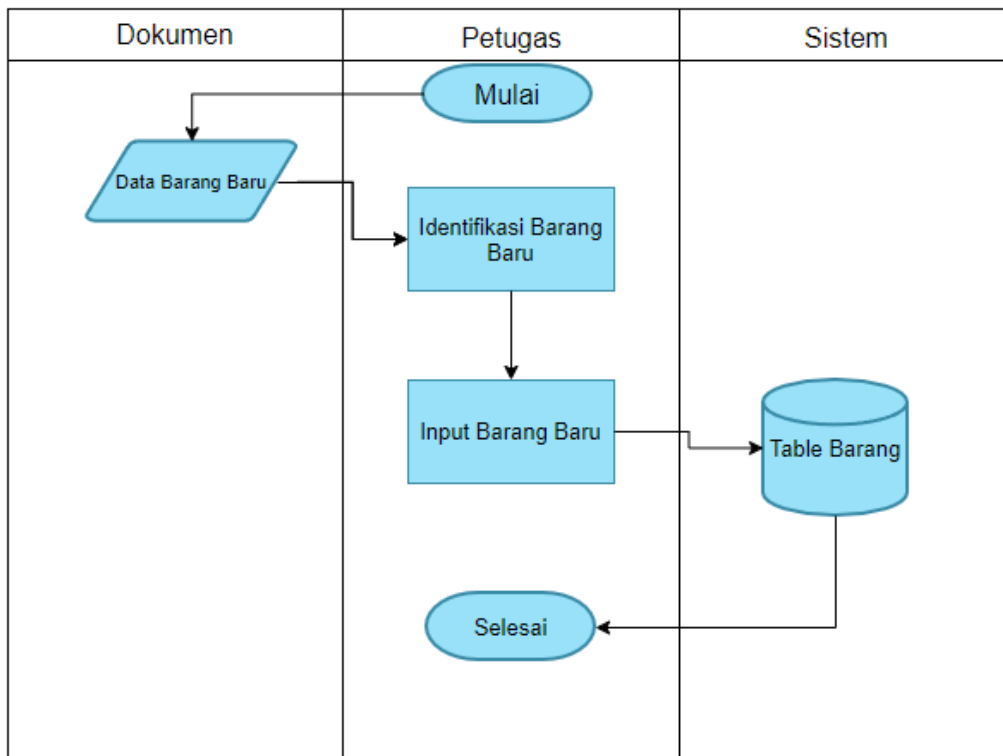
| tabel_barang         |           |        |          |                                     |
|----------------------|-----------|--------|----------|-------------------------------------|
| Nama Field           | Tipe Data | Ukuran | Key      | Keterangan                          |
| kode_barang (pk)     | varchar   | 20     | Primary  | kode barang                         |
| nama_barang          | varchar   | 20     | Not null | nama barang                         |
| warna_barang         | varchar   | 12     | Not null | warna barang                        |
| deskripsi_barang     | text      | 60     | Not null | deskripsi barang                    |
| harga_barang         | int       | 10     | Not null | harga barang                        |
| kode_fasilitas (fk)  | varchar   | 10     | Foreign  | kode fasilitas dimana barang berada |
| kategori_barang (fk) | varchar   | 10     | Foreign  | kategori barang                     |
| tgl_masuk            | date      |        | Not null | tanggal barang masuk                |

### 3 RANCANGAN ERD



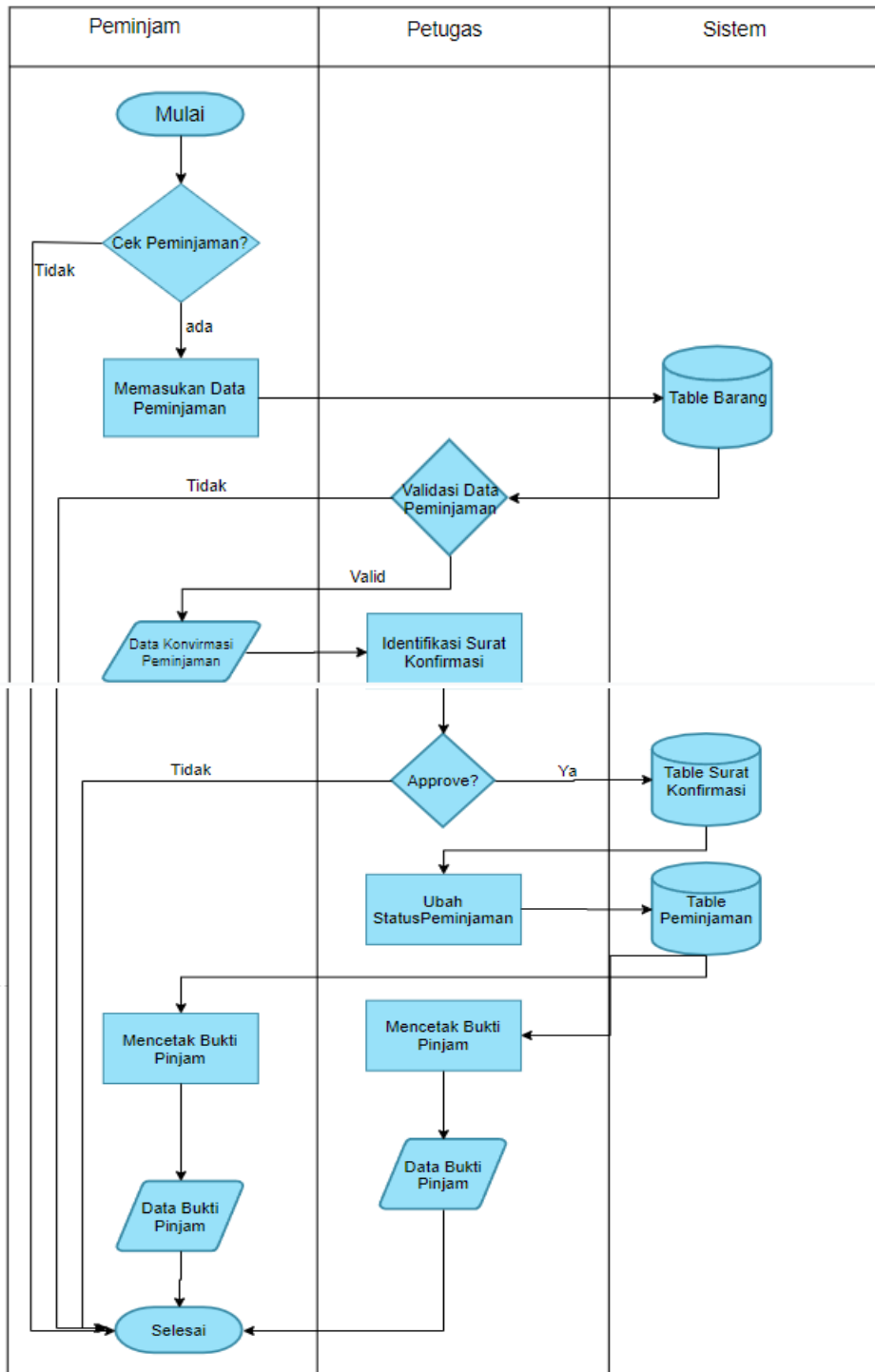
### 4 FLOWCHART

**Flowchart Pengadaan Barang**

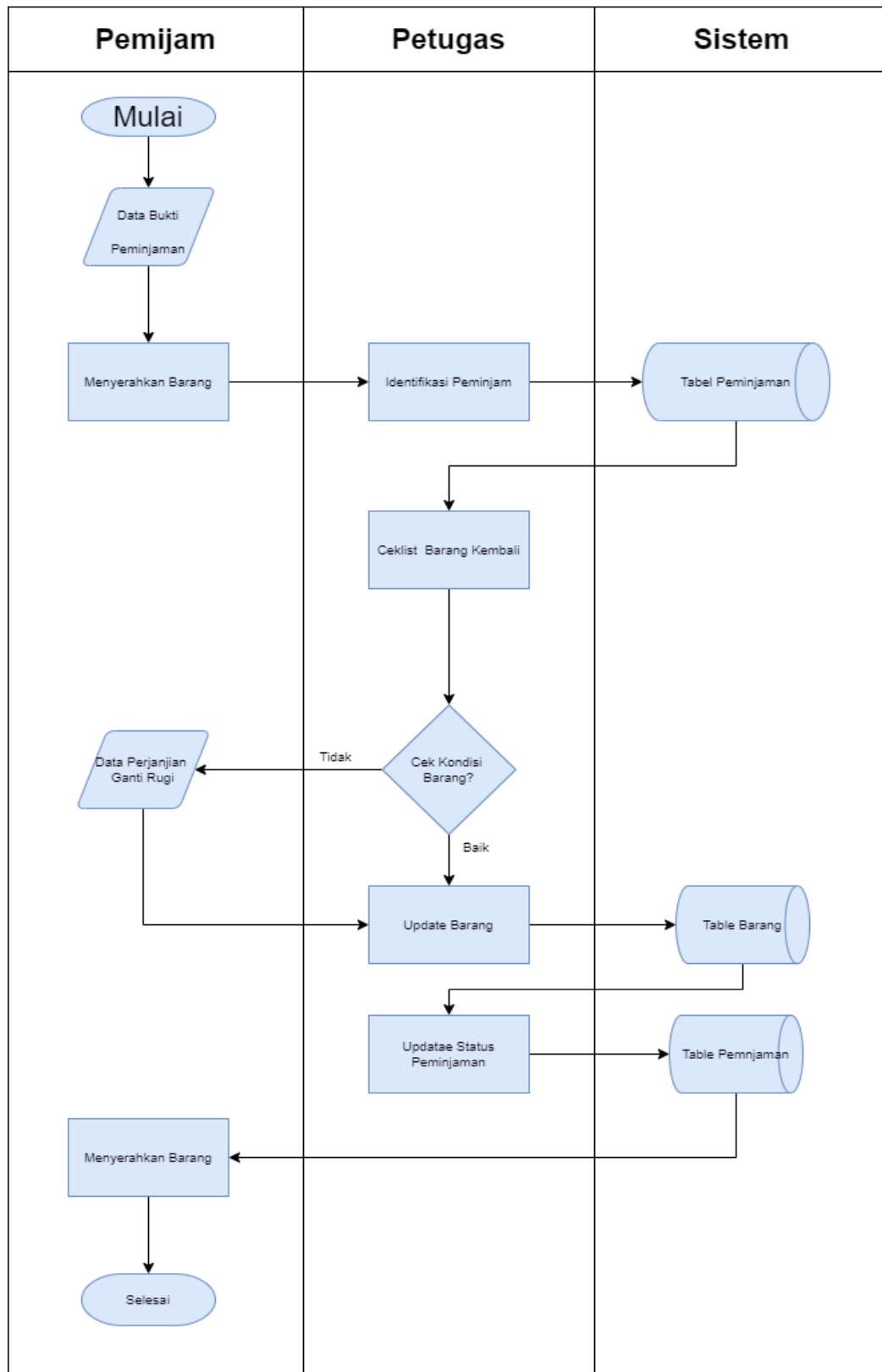




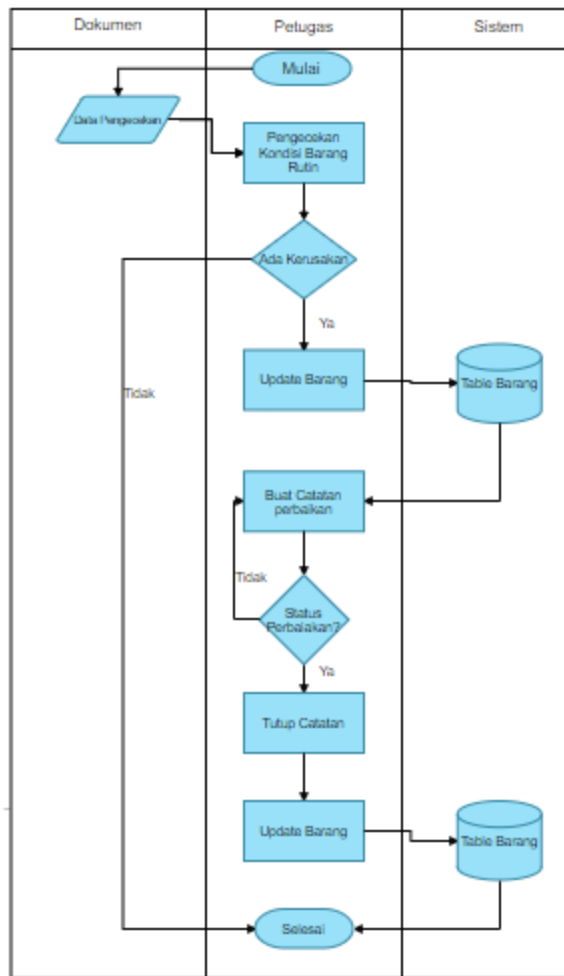
**Flowchart Peminjaman Barang**



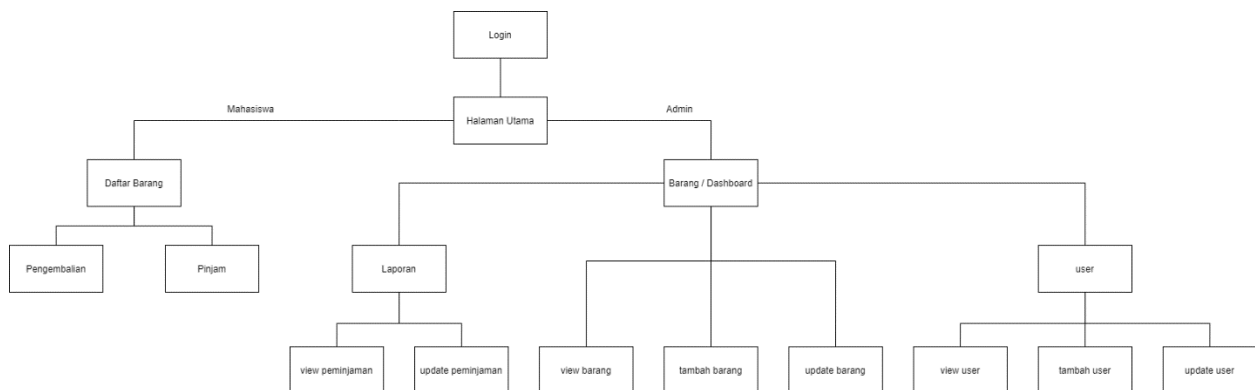
## Flowchart Pengembalian Barang



Flowchart Pengelolaan Barang

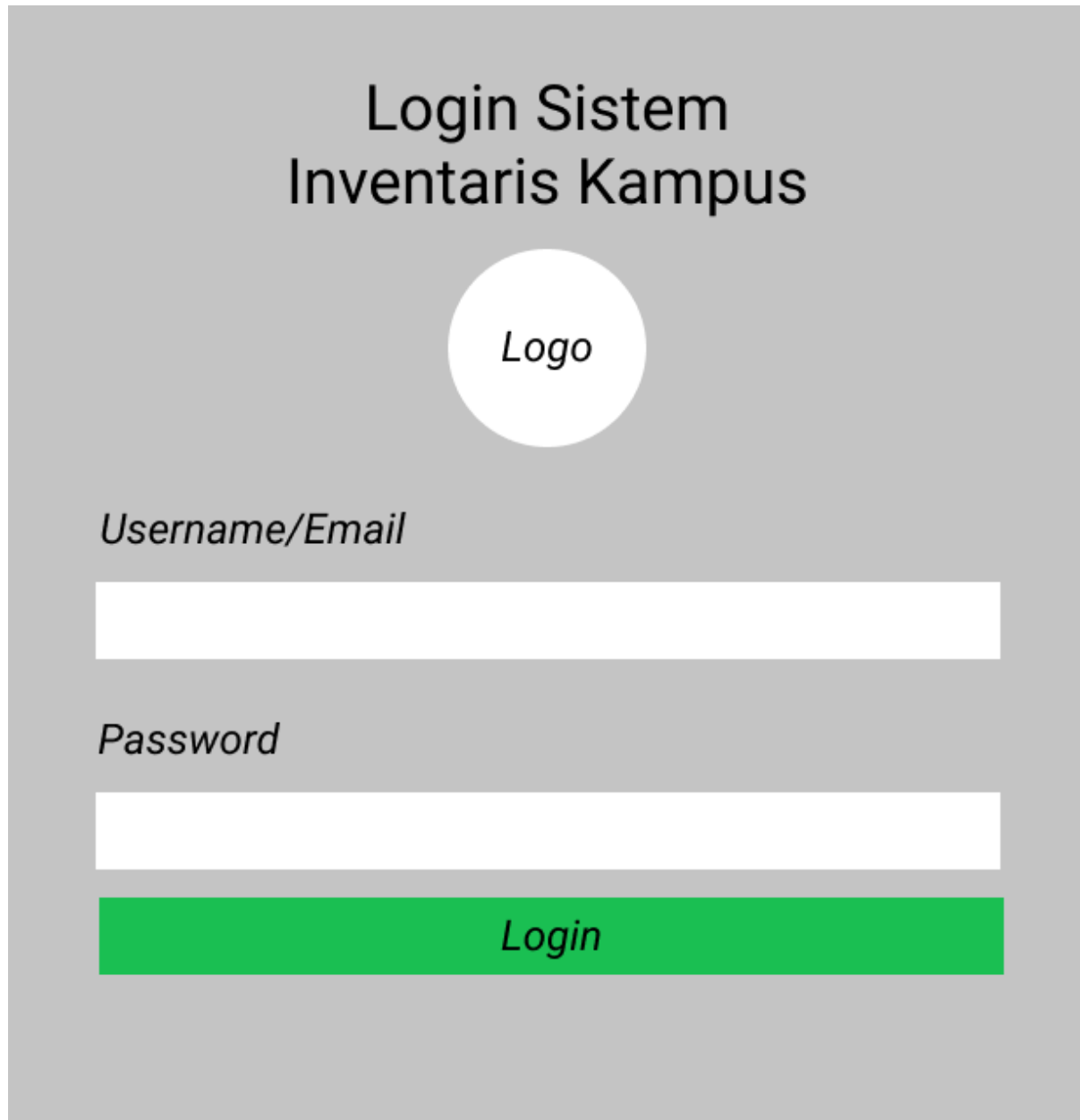


## 5 RANCANGAN ARSITEKTUR



## 6 INTERFACE HALAMAN

### 6.1 Halaman Login



The image shows a login interface for a system titled "Login Sistem Inventaris Kampus". The interface is set against a light gray background. At the top, the title is centered in a large, black, sans-serif font. Below the title is a white circle containing the word "Logo" in a black, italicized font. Underneath the logo, the label "Username/Email" is displayed in a black, italicized font, followed by a white rectangular input field. Below this, the label "Password" is shown in a black, italicized font, followed by another white rectangular input field. At the bottom of the form is a green rectangular button with the word "Login" in a black, italicized font.

Login Sistem  
Inventaris Kampus

*Logo*

*Username/Email*

*Password*

*Login*

## 6.2 Halaman Beranda



### Panduan Peminjaman Barang

#### Pendahuluan

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi blandit urna eget ligula viverra eleifend. Cras ac sodales ante. Integer gravida massa metus, eu lacinia mi varius ut. Donec sit amet purus vulputate, vestibulum neque rhoncus, viverra felis. Ut eget aliquam justo, ut tempus lacus. Donec quis mauris dui. Maecenas purus arcu, laoreet elementum est quis, convallis pharetra est. Nunc ultricies egestas lectus, sit amet aliquet lectus sagittis vitae. In consequat bibendum eros, sed ultricies elit euismod ut. Suspendisse volutpat malesuada quam et ullamcorper. Nam porttitor gravida porta. Sed non libero mi. Donec placerat laculis nisi. Aliquam facilisis libero at aliquet pharetra.

Ut ut blandit turpis, non elementum velit. Phasellus nisi elit, varius ac massa ut, consectetur accumsan lorem. Proin convallis, purus sed bibendum hendrerit, nisi sapien tristique enim, sollicitudin maximus risus turpis eu lacus. Vivamus imperdiet, risus sed tempus euismod, dolor nulla ullamcorper sapien, quis mollis diam lorem sit amet sem. Proin ac mi vitae justo efficitur pretium ut quis turpis. Nunc scelerisque egestas viverra. Nunc porttitor, libero nec semper hendrerit, sem tortor lacinia leo, sit amet imperdiet est eros sed sapien. Vestibulum facilisis, tortor eget lacinia auctor, nibh nisi laculis justo, eu aliquam nulla ex ut risus. Nam ut commodo libero. In lacinia, libero vitae dignissim ullamcorper, lectus enim rhoncus urna, hendrerit sodales augue mauris non sem. Sed dignissim nunc fringilla nisi ultricies dapibus.

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#### Syarat dan Ketentuan

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Ut ut blandit turpis, non elementum velit. Phasellus nisi elit, varius ac massa ut, consectetur accumsan lorem. Proin convallis, purus sed bibendum hendrerit, nisi sapien tristique enim, sollicitudin maximus risus turpis eu lacus. Vivamus imperdiet, risus sed tempus euismod, dolor nulla ullamcorper sapien, quis mollis diam lorem sit amet sem. Proin ac mi vitae justo efficitur pretium ut quis turpis. Nunc scelerisque egestas viverra. Nunc porttitor, libero nec semper hendrerit, sem tortor lacinia leo, sit amet imperdiet est eros sed sapien. Vestibulum facilisis, tortor eget lacinia auctor, nibh nisi laculis justo, eu aliquam nulla ex ut risus. Nam ut commodo libero. In lacinia, libero vitae dignissim ullamcorper, lectus enim rhoncus urna, hendrerit sodales augue mauris non sem. Sed dignissim nunc fringilla nisi ultricies dapibus.

Ut eleifend eros ligula, eu pharetra lorem tincidunt et. Integer vitae lorem vitae felis interdum semper. Vestibulum ornare orci ipsum. Integer et urna consequat, laoreet urna nec, pharetra felis. Praesent vel mattis odio. Donec lobortis neque lectus. Sed nulla velit, dapibus in imperdiet non, facilisis vel nisi. Aliquam elit sapien, ultricies sed efficitur id, dictum ac lacus. Maecenas id convallis tortor. Curabitur rhoncus maximus nisi efficitur fermentum. Nulla ullamcorper augue urna, id molestie erat condimentum sed. Vestibulum scelerisque felis leo, vel dictum est vulputate ut. Ut eget sem laculis, dictum mauris sit amet, tincidunt ex. Suspendisse imperdiet ultrices augue nec tincidunt. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilla curae; In at pharetra urna, quis mollis ipsum.

Pinjam Barang

### 6.3 Halaman Daftar Barang

Logo

Sistem Inventaris Kampus

Login Admin

| Kode_barang | Nama_barang | Warna_barang | Deskripsi_barang        | Harga_barang  | Kode_fasilitas | Kategori_barang | Tgl_masuk  | Option |
|-------------|-------------|--------------|-------------------------|---------------|----------------|-----------------|------------|--------|
| Barang1     | LCD         | Hitam        | LCD LG 24"              | Rp. 1.240.000 | Gedung1        | Elektronik      | 16/12/2019 | Piagam |
| Barang2     | Proyektor   | Putih        | Proyektor Viewsonic 503 | Rp. 4.340.000 | Gedung1        | Elektronik      | 20/01/2020 | Piagam |
| Barang3     | LCD         | Hitam        | LCD LG 24"              | Rp. 1.240.000 | Gedung2        | Elektronik      | 16/12/2019 | Piagam |
| Barang4     | LCD         | Hitam        | LCD LG 24"              | Rp. 1.240.000 | Gedung2        | Elektronik      | 16/12/2019 | Piagam |
| Barang5     | LCD         | Hitam        | LCD LG 24"              | Rp. 1.240.000 | Gedung2        | Elektronik      | 16/12/2019 | Piagam |
|             |             |              |                         |               |                |                 |            |        |

Pengembalian Barang

## 6.4 Halaman Pinjam Barang

Logo

Sistem Inventaris Kampus

### Pinjam Barang

Kode Barang

NIM

Tanggal Peminjaman

Tanggal Pengembalian

Peminjam

☐ Perseorangan   ☐ Organisasi

Id Organisasi (jika organisasi)

## 6.5 Halaman Pengembalian Barang

Logo

Sistem Inventaris Kampus

### Pengembalian Barang

Kode Peminjaman

NIM

## 6.6 Halaman Dashboard admin / barang

Sistem Inventaris Kampus

Logo

Sistem Inventaris Kampus

icon Dashboard

icon Laporan

icon User

icon Logout

Search...

Filter

| Kode_barang | Nama_barang | Warna_barang | Deskripsi_barang        | Harga_barang  | Kode_fasilitas | Kategori_barang | Tgl_masuk  | Option                                     |
|-------------|-------------|--------------|-------------------------|---------------|----------------|-----------------|------------|--|
| Barang1     | LCD         | Hitam        | LCD LG 24"              | Rp. 1,240,000 | Gedung1        | Elektronik      | 16/12/2019 | <a href="#">Edit</a> <a href="#">Hapus</a> |
| Barang2     | Proyektor   | Putih        | Proyektor Viewsonic 503 | Rp. 4,340,000 | Gedung1        | Elektronik      | 20/01/2020 | <a href="#">Edit</a> <a href="#">Hapus</a> |
| Barang3     | LCD         | Hitam        | LCD LG 24"              | Rp. 1,240,000 | Gedung2        | Elektronik      | 16/12/2019 | <a href="#">Edit</a> <a href="#">Hapus</a> |
| Barang4     | LCD         | Hitam        | LCD LG 24"              | Rp. 1,240,000 | Gedung2        | Elektronik      | 16/12/2019 | <a href="#">Edit</a> <a href="#">Hapus</a> |
| Barang5     | LCD         | Hitam        | LCD LG 24"              | Rp. 1,240,000 | Gedung2        | Elektronik      | 16/12/2019 | <a href="#">Edit</a> <a href="#">Hapus</a> |

Tambah Data



## 6.7 Halaman Input barang

Sistem Inventaris Kampus

Logo

Sistem Inventaris Kampus

icon Dashboard

icon Laporan

icon User

icon Logout

### Tambah Barang

Nama Barang

Warna Barang

Deskripsi Barang

Harga Barang

Fasilitas

-- Pilih --

Gedung 1

Gedung 2

Gedung 3

Kategori Barang

Tanggal Masuk Barang

Tambah Data

## 6.8 Halaman Update Barang

Sistem Inventaris Kampus

Logo

Sistem Inventaris Kampus

icon Dashboard

icon Laporan

icon User

icon Logout

### Update Barang

Nama Barang

Warna Barang

Deskripsi Barang

Harga Barang

Fasilitas

-- Pilih --

Gedung 1

Gedung 2

Gedung 3

Kategori Barang

Tanggal Masuk Barang

BatalUpdate Data

## 6.9 Halaman Laporan / Peminjaman

Sistem Inventaris Kampus

Logo

Sistem Inventaris Kampus

icon Dashboard

icon Laporan

icon User

icon Logout

Search...

Filter

| No. | Kode Pinjam | Id Barang | Id Pinjam  | Id Organisasi | Tgl Pinjam | Tgl Kembali | status pinjam | Option       |
|-----|-------------|-----------|------------|---------------|------------|-------------|---------------|--------------|
| 1   | Pinjam1     | Barang1   | 5200000001 | Organisasi1   | 11/12/2020 | 12/12/2020  | Dipinjam      | Edit Hapus   |
| 2   | Pinjam2     | Barang4   | 5200511006 | Organisasi2   | 15/02/2021 | 17/02/2021  | Izin Meminjam | Setuju Tolak |
| 3   | Pinjam3     | Barang19  | 5200010201 | Organisasi3   | 16/02/2021 | 18/02/2021  | Dengembalikan | Setuju Tolak |
| 4   | Pinjam4     | Barang8   | 5200701201 | Organisasi4   | 22/02/2021 | 25/02/2021  | Kembali       | Edit Hapus   |

Tambah Data

## 6.10 Halaman Update Peminjaman

Sistem Inventaris Kampus

Logo

Sistem Inventaris Kampus

icon Dashboard

icon Laporan

icon User

icon Logout

### Pinjam Barang

Kode Barang

NIM

Tanggal Peminjaman

Tanggal Pengembalian

Peminjam

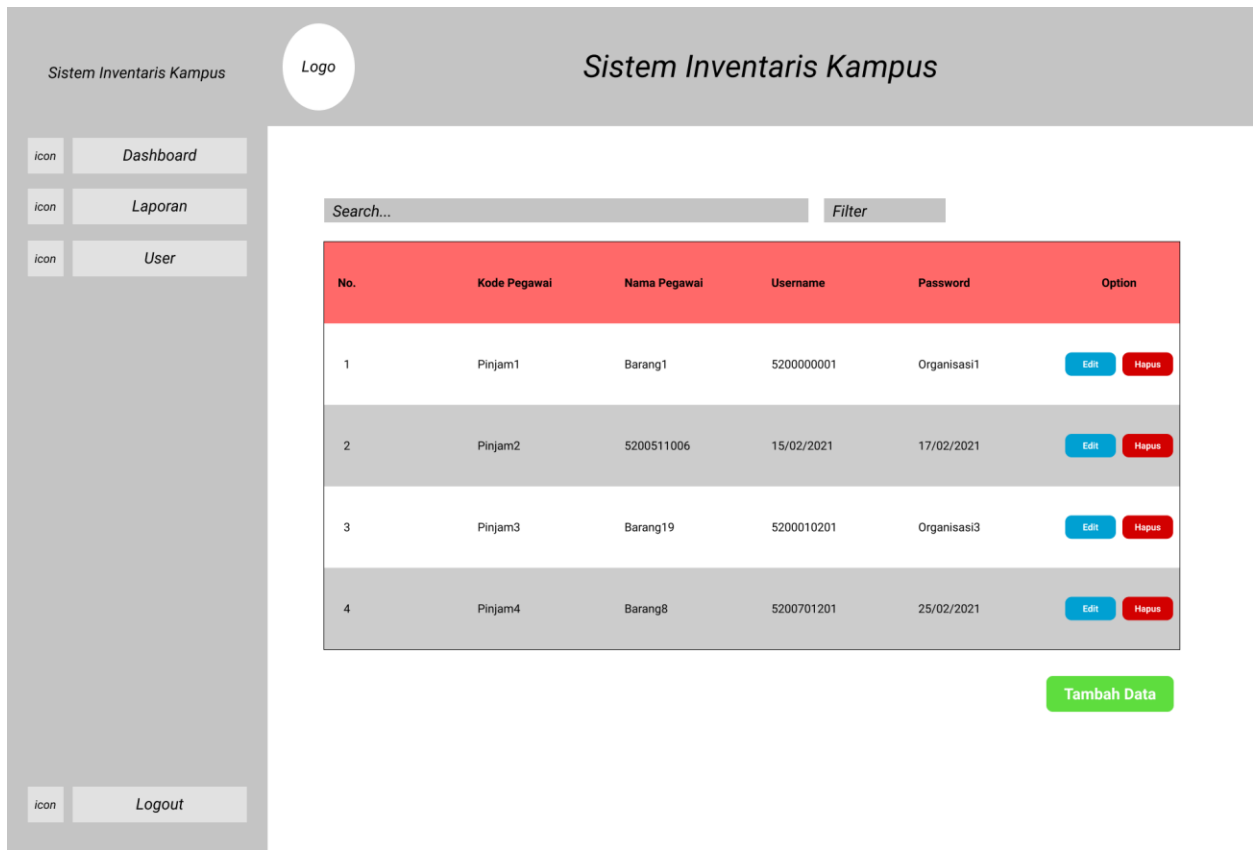
☐ Perseorangan ☐ Organisasi

Id Organisasi (jika organisasi)

Batal

Update

## 6.11 Halaman User list



## 7 REFERENSI

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