

Asset Management System

Group 2 – Yellow Socks

2025.08.21

socksuga
norata





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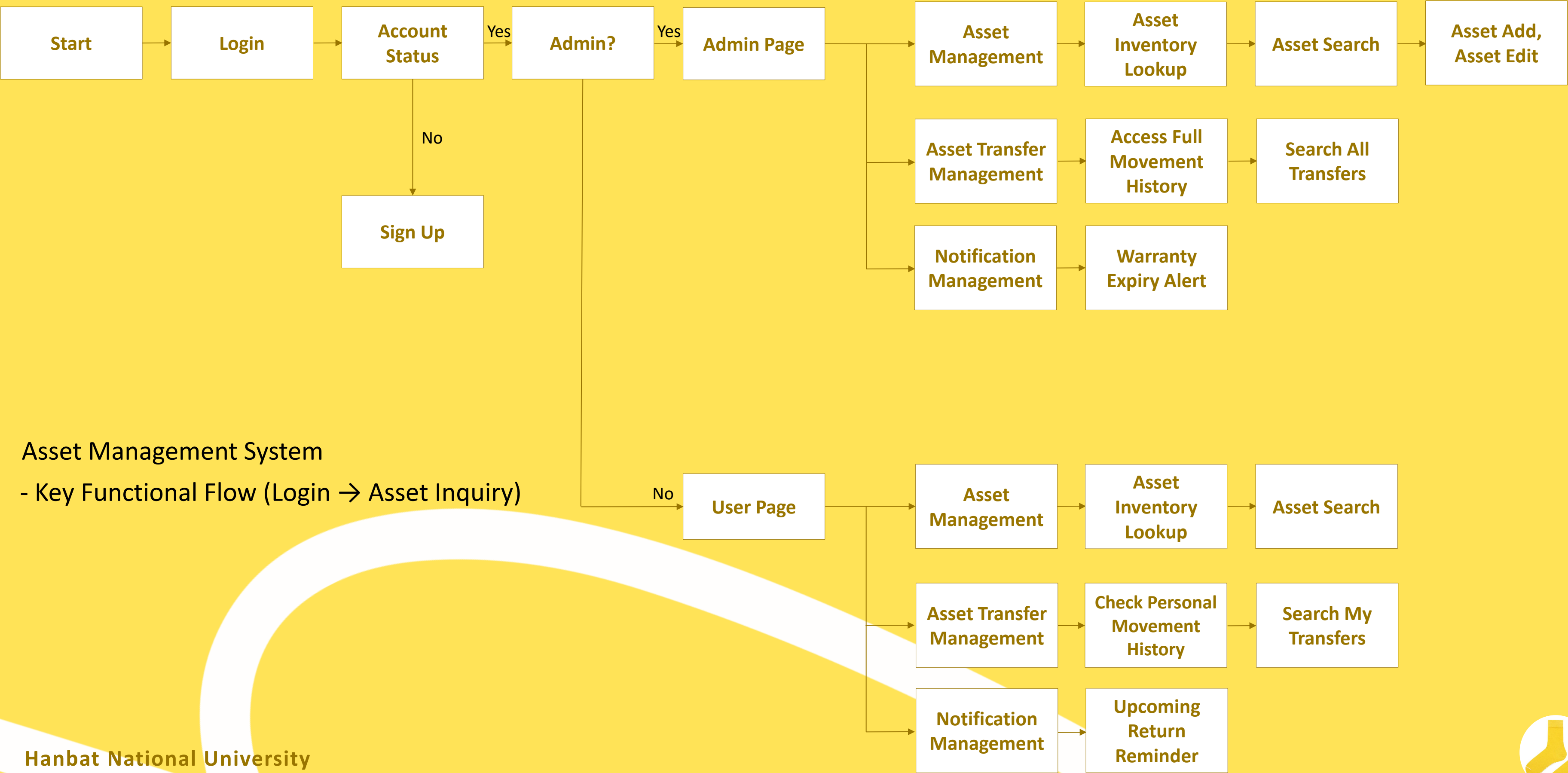
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1. Flow Chart



- Asset Management System
 - Key Functional Flow (Login → Asset Inquiry)



2. Roles and Responsibilities

Backend
Frontend
DB

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<Jihyun Kim>

Backend
Design
PPT

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/づ
<Junseong Park>

Leader
Design
PPT

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(T - T). ||
/づ
<Minyeong Shin>

Design
Frontend
PPT

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(~ ^ ~). ||
/づ
<Black Suan>



3. Versions, Tools, and Programs Used

- Database

- PostgreSQL
- Managed through DataGrip

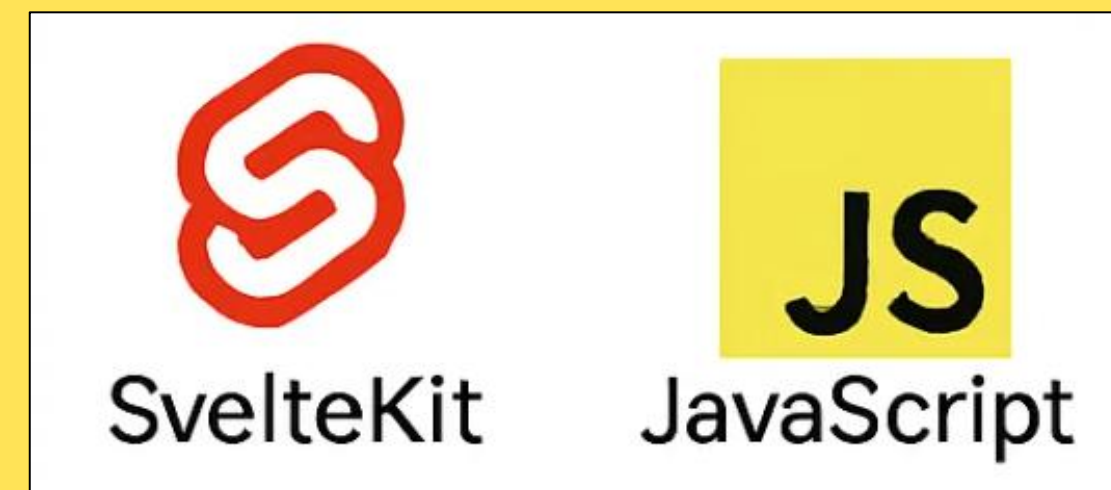
- Backend

- Language: Java 17
- Framework: Spring Boot 3.5.4
- Build Tool: Gradle
- IDE: IntelliJ IDEA



- Frontend

- Language: JavaScript (Node.js environment)
- Framework: Svelte
- UI Design Tool: Figma



4. UI / UX Design - Login

YELLOW SOCKS

Login

Password

[Forgot password?](#)

Sign in

Don't have an account? [Sign up now](#)



4. UI / UX Design - Sign Up

Activate your account

User name

Enter your name

ID

Enter your ID

Password

Enter your Password

Select your role

Admin

User

Sign up



4. UI / UX Design - Admin Screen (Management)

YELLOW SOCKS

user name 

Asset Menu

- Management
- Movement

Notification

- Overdue


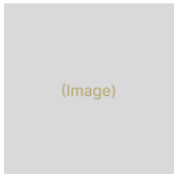
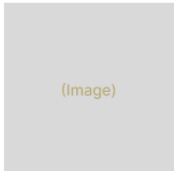
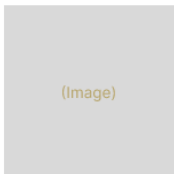
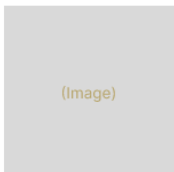
CSD-0002 · Lenovo Tab P11
Return: 2025-08-12 · D+7
Custodian: David Lim
Faculty of Engineering

Campus: Sarawak Campus
IT Lab 1

- Low Stack

USB-C Adapter
Stock 2 / Min 10
Store: Sarawak Capmus

[logout](#)

	Type :	Department :	<input checked="" type="checkbox"/>
	Model :	Custodian :	<input type="button" value="Edit"/>
	Location :	Status :	<input type="button" value="View Details"/>
	Type :	Department :	<input checked="" type="checkbox"/>
	Model :	Custodian :	<input type="button" value="Edit"/>
	Location :	Status :	<input type="button" value="View Details"/>
	Type :	Department :	<input type="checkbox"/>
	Model :	Custodian :	<input type="button" value="Edit"/>
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	Type :	Department :	<input type="checkbox"/>
	Model :	Custodian :	<input type="button" value="Edit"/>
	Location :	Status :	<input type="button" value="View Details"/>
	Type :	Department :	<input type="checkbox"/>
	Model :	Custodian :	<input type="button" value="Edit"/>
	Location :	Status :	<input type="button" value="View Details"/>

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1
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3
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5
6
7
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- Asset ID
- Asset Type
- Asset Category
- Brand & Model
- Serial Number
- Purchase Date
- Supplier / Vendor
- Purchase Order / Invoice No.
- Warrant Start & End Date
- Location
- Department / Faculty assigned
- Custodian / Responsible Person
- Status
- Depreciation / Book Value
- Asset Photo

- Asset ID
CSD-0001
- Asset Type
Printer
- Asset Category
IT Hardware
- Brand & Model
Canon imageCLASS MF743Cdw
- Serial Number
SN853613
- Purchase Date
02/12/2022
- Supplier / Vendor
ITWorld Distribution
- Purchase Order / Invoice No.
PRF3124
- Warrant Start & End Date
02/12/2022 - 01/12/2025
- Location
Sarawak Campus / IT Lab 1
- Departent / Faculty assigned
Faculty of Engineering
- Custodian / Responsible Person
Mohd Hafiz
- Status
Under Maintenance
- Depreciation / Book Value
3611.33
- Asset Photo
Asset Photo



4. UI / UX Design - Admin Screen (Add)

YELLOW SOCKS


user name 

Asset Menu

- Management

- Movement

Notification

• Overdue 

CSD-0002 • Lenovo Tab P11


Return: 2025-08-12 • D+7

Custodian: David Lim

Faculty of Engineering

Campus: Sarawak Campus

IT Lab 1

• Low Stack 

USB-C Adapter

Stock 2 / Min 10

Store: Sarawak Capmus

Asset ID

CSD-0001

Asset Type

Printer

Asset Category

IT Hardware

Brand & Model

Brand

Model

Serial Number

SN853613

Purchase Date

02/12/2022

Supplier / Vendor

ITWorld Distribution

Purchase Order / Invoice No.

PRF3124

Warrant Start & End Date

02/12/2022 - 01/12/2025

Location

Sarawak Campus / IT Lab 1

Department / Faculty assigned

Faculty of Engineering

Custodian / Responsible Person

Mohd Hafiz

Status

Under Maintenance

Depreciation / Book Value

3611.33

Asset Photo

Asset Photo


ADD

logout



4. UI / UX Design - Admin Screen (Edit)

YELLOW SOCKS


user name 

Asset Menu

- Management

- Movement

Notification

• Overdue 

CSD-0002 · Lenovo Tab P11


Return: 2025-08-12 · D+7

Custodian: David Lim

Faculty of Engineering

Campus: Sarawak Campus

IT Lab 1

• Low Stack 

USB-C Adapter

Stock 2 / Min 10

Store: Sarawak Capmus

Asset ID

CSD-0001

Asset Type

Printer

Asset Category

IT Hardware

Brand & Model

Brand

Model

Serial Number

SN853613

Purchase Date

02/12/2022

Supplier / Vendor

ITWorld Distribution

Purchase Order / Invoice No.

PRF3124

Warrant Start & End Date

02/12/2022 - 01/12/2025

Location

Sarawak Campus / IT Lab 1

Department / Faculty assigned

Faculty of Engineering

Custodian / Responsible Person

Mohd Hafiz

Status

Under Maintenance

Depreciation / Book Value

3611.33

Asset Photo

Asset Photo

EDIT

logout



4. UI / UX Design - Admin Screen (Movement)

YELLOW SOCKS

user name

Asset Menu

- Management

- **Movement**

Notification

• Overdue

CSD-0002 · **Lenovo Tab P11**
Return: 2025-08-12 · D+7
Custodian: David Lim
Faculty of Engineering

Campus: Sarawak Campus
IT Lab 1

• Low Stack

USB-C Adapter
Stock 2 / Min 10
Store: Sarawak Capmus

Movement

Enter the word you want to search for

	Asset-ID	Type	Department	Movement	Date-Taken-Out	Date-Returned
1	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
2	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
3	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
4	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
5	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
6	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
7	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
8	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
9	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
10	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
11	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
12	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
13	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
14	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
15	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
16	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
17	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
18	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
19	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022
20	CSD-0001	Printer	Engineering	Check-in	02/12/2022	02/12/2022

<

1

2

3

4

5

6

7

>

Add

• Asset ID
CSD-0001

• Movement ID
Printer

• Movement Type
IT Hardware

• Date Taken Out
Cannon imageCLASS MF743Cdw

• Person Taking Asset
SN853613

• Faculty / Department
02/12/2022

• Purpose / Remarks
ITWorld Distribution

• Approval Status
PRF3124

• Condition at Checkout / Check in
02/12/2022 - 01/12/2025

Edit

logout

4. UI / UX Design - Users Screen (Management)

YELLOW SOCKS

user name

Asset Menu

- Management

- My page

Notification

Product Name : Laptop

Rental Date : 2025-08-20

Return Date : 2025-08-27

D-3

(_/)

(^_^).

/...づ

Enter the word you want to search for

(Image)

Type :

Department :

Model :

Custodian :

Location :

Status :

View Details

(Image)

Type :

Department :

Model :

Custodian :

Location :

Status :

View Details

(Image)

Type :

Department :

Model :

Custodian :

Location :

Status :

View Details

(Image)

Type :

Department :

Model :

Custodian :

Location :

Status :

View Details

(Image)

Type :

Department :

Model :

Custodian :

Location :

Status :

View Details

< 1 2 3 4 5 6 7 >

Asset ID

CSD-0001

Asset Type

Printer

Asset Category

IT Hardware

Brand & Model

Cannon imageCLASS MF743Cdw

Serial Number

SN853613

Purchase Date

02/12/2022

Supplier / Vendor

ITWorld Distribution

Purchase Order / Invoice No.

PRF3124

Warrant Start & End Date

02/12/2022 - 01/12/2025

Location

Sarawak Campus / IT Lab 1

Department / Faculty assigned

Faculty of Engineering

Custodian / Responsible Person

Mohd Hafiz

Status

Under Maintenance

Depreciation / Book Value

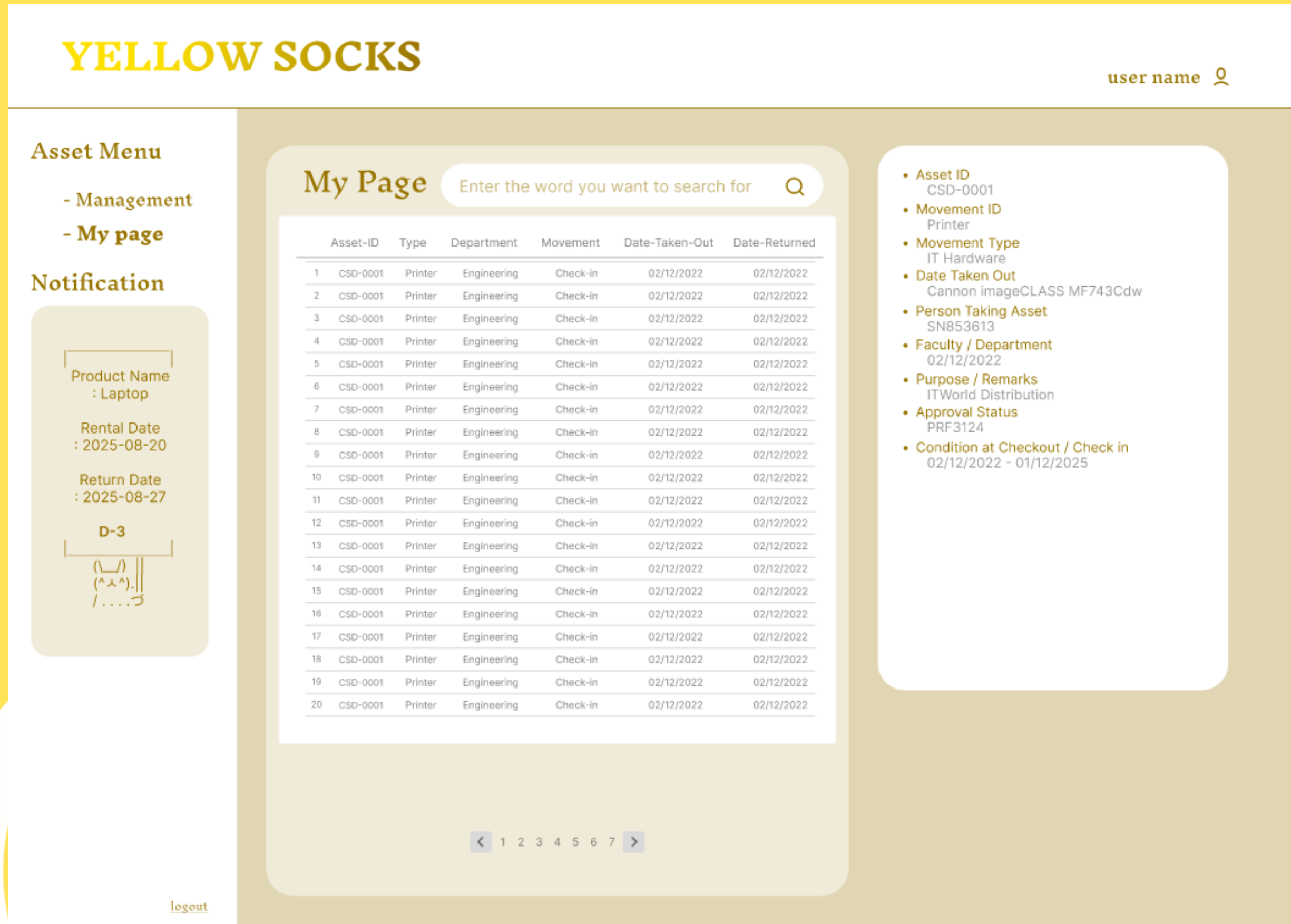
3611.33

Asset Photo

Asset Photo


logout

4. UI / UX Design - Users Screen (Mypage)



4. UI / UX Design - Users Screen (notification)

YELLOW SOCKS

user name 

Asset Menu

- Management
- **My page**

Notification

!

Product Name
: Laptop

Rental Date
: 2025-08-20

Return Date
: 2025-08-27

D-3

()

()

()

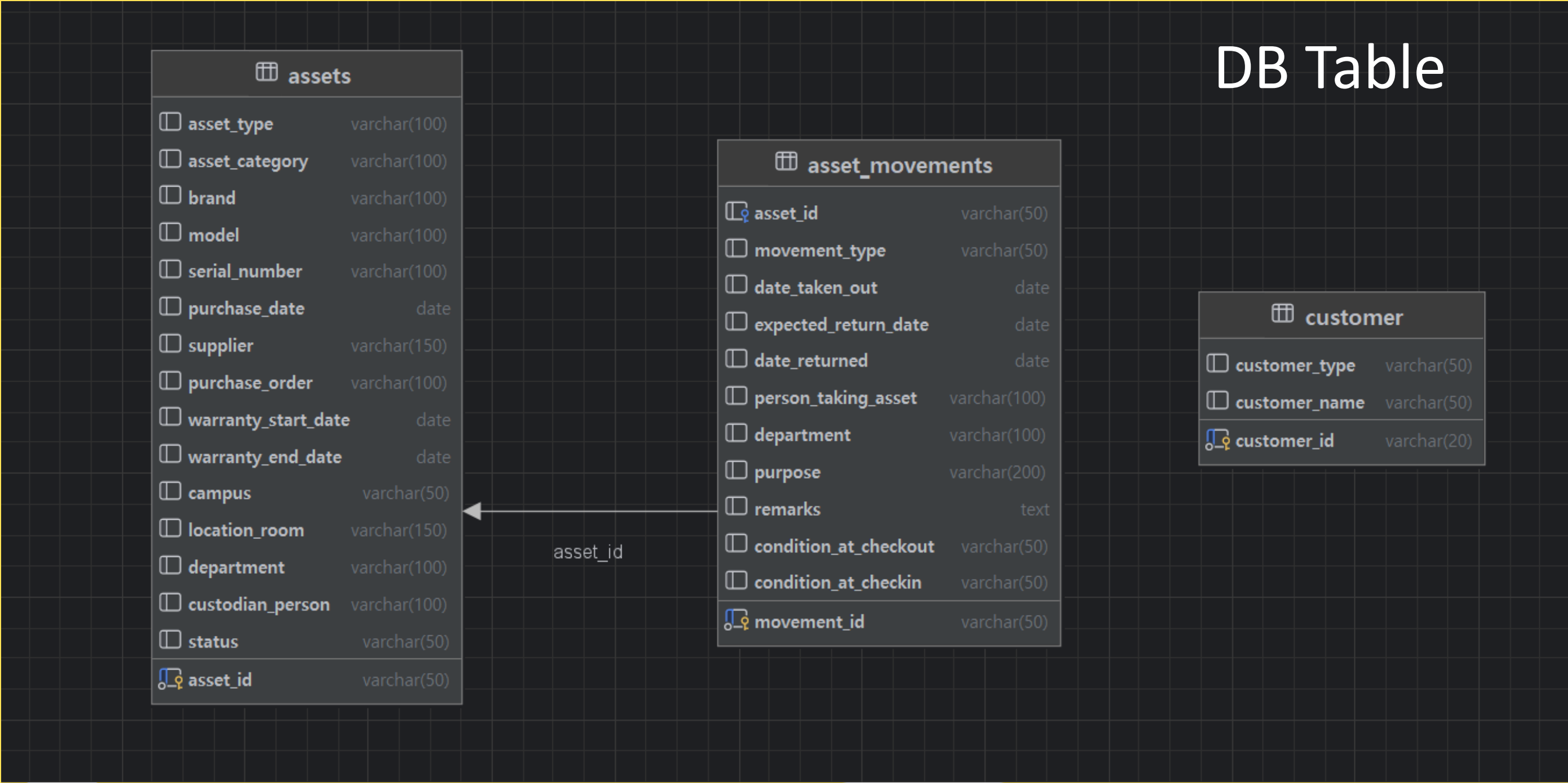
logout

Notification

Asset ID	CSD-0001	
Asset Type	Printer	
Asset Category	IT Hardware	
Brand & Model	Brand	Model
Serial Number	SN853613	
Purchase Date	02/12/2022	
Supplier / Vendor	ITWorld Distribution	
Purchase Order / Invoice No.	PRF3124	
Warrant Start & End Date	02/12/2022 - 01/12/2025	
Location	Sarawak Campus / IT Lab 1	
Department / Faculty assigned	Faculty of Engineering	
Custodian / Responsible Person	Mohd Hafiz	
Status	Under Maintenance	
Depreciation / Book Value	3611.33	
Responsible person	Asset Photo	



5. Features (DB)



5. Features (Backend)

Controller

```
@RestController
@RequestMapping("/api/assets")
public class AssetController {

    private final AssetService assetService;

    // GET
    @GetMapping
    public ResponseEntity<List<Asset>> getAssets() {
        return ResponseEntity.ok(assetService.findAssets());
    }

    // search --> ex: /search?asset_type=printer
    @GetMapping("/search")
    public ResponseEntity<List<Asset>> searchAsset(AssetSearchCondition cond) {
        return ResponseEntity.ok(assetService.search(cond));
    }
}
```

JdbcTemplateRepository

```
@Override
public List<Asset> findAll() {
    String sql = "SELECT * FROM assets";
    return jdbcTemplate.query(sql, rowMapper());
}

@Override
public List<Asset> search(AssetSearchCondition cond) {
    String sql = "SELECT * FROM assets WHERE 1=1";
    List<Object> params = new ArrayList<>();

    if (cond.getAssetId() != null) {
        sql += " AND asset_id LIKE ?";
        params.add("%" + cond.getAssetId() + "%");
    }

    if (cond.getAssetType() != null) {
        sql += " AND asset_type LIKE ?";
        params.add("%" + cond.getAssetType() + "%");
    }

    if (cond.getAssetCategory() != null) {
        sql += " AND asset_category LIKE ?";
        params.add("%" + cond.getAssetCategory() + "%");
    }
}
```



5. Features (Frontend)

```
async function loadAssets() {
  loadingAssets = true;
  loadErr = '';
  try {
    const res = await fetch(`${API_BASE}/api/assets`, { headers: { Accept: 'application/json' } });
    if (!res.ok) throw new Error(`GET /api/assets -> ${res.status}`);
    const data = await res.json();
    assets = Array.isArray(data) ? data : [];
    if (currentPage > Math.ceil(assets.length / PAGE_SIZE)) currentPage = 1;
  } catch (e) {
    console.error(e);
    loadErr = 'Unable to load asset list.';
  } finally {
    loadingAssets = false;
  }
}
```

Frontend loadAssets(fetch) -> API request -> Controller -> JdbcTemplateRepository -> Database



6. Limitations & Challenges

- **Version Control**
 - GitHub was not fully utilized (used mainly for file sharing, not proper version management).
- **Notification System**
 - Not implemented for both admin and users.
- **Admin Functions**
 - Cannot add/edit assets in the Asset Table.
 - Cannot add/delete records in the Asset Movement Table.
- **User Functions**
 - Cannot add/edit/delete in the Asset Table.
 - Asset Table is not linked with the Asset Movement Table.



socksuga norata



Terima Kasih