

# SERVER-SIDE MODULE

## CONTENTS

This module has the following files:

1. MODULE\_SERVER\_SIDE.doc
2. MODULE\_SERVER\_SIDE\_MEDIA.zip

## INTRODUCTION

A car sales company wants to sell cars to many types of people. not all people can buy a car with cash. So the company appoints you as a competent person to create an instalment cars platform.

The goal of this platform is for people to make car instalment transactions online.

## DESCRIPTION OF PROJECTS AND TASKS

Registration involves the society platform (registering to the platform and applying for instalment), the company platform (giving instalment cars, viewing and accepting/rejecting registrations from the instalment), and the officer platform (updating company data, checking the validity of society data).

This module is divided into two phases. In the first phase, you will create a REST API. In the second phase, you will build a frontend application. You must use the provided frameworks:

- Laravel (v12.x)
- React (v18.x with react-router-dom and axios)
- Vue (v3.x with vue-router and axios)

## Phase one – Society Car instalment REST API

### Authentication

Before a society performs any activity on the society platform, they must be logged in using their **ID card number and password**. **Sanctum** should be used to create tokens. The generated token will be used to access all available endpoints.

### Specifications :

Feature: A1 - Login and Logout as society: as a visitor, i want to login so that i can enter the system and apply for Instalment.

#### **Scenario: Society Login**

Request:

URL: [domain]/api/v1/auth/login

Method: POST

Header:

Body: { id\_card\_number: "SomeText", password: "SomeText" }

Response:

A1a - If login success

Header: Response code: 200

Body: {

```
    "name": "Doni Rianto",
    "born_date": "1974-10-22",
    "gender": "male"|"female",
    "address": "Ki. Raya Setiabudhi No. 790",
    "token": "1|qgV2cTisoRVSwX6R2iPpxd..",
    "regional": {
        "id": 1,
        "province": "DKI Jakarta",
        "district": "Central Jakarta"
    }
}
```

}

A1b - If ID Card Number or Password incorrect

Header: Response code: 401

Body: { "message": "ID Card Number or Password incorrect" }

### **Scenario: Society Logout**

#### Request:

URL: [domain]/api/v1/auth/logout

Params:

Method: POST

Header: { Authorization: Bearer xxxxxx }

Body:

#### Response:

A1c - If logout success

Header: Response code: 200

Body: { "message": "Logout success" }

A1d - If logout invalid token

Header: Response code: 401

Body: { "message": "Invalid token" }

## **Request Data Validation**

To be able to apply for Instalment, the society must do validation data on the platform first. The society can view validity status and make validation requests. The society can only make one validation data request.

### **Specifications:**

Feature: A2 - Request Data Validation: As a society, I want to request data validation so that I can apply for instalment when my data validation is accepted.

### **Scenario: Request data validations**

#### Request:

URL: [domain]/api/v1/validation

Params:

Method: POST

Header:{ Authorization: Bearer xxxxxx }

Body: { job: "SomeText", job\_description: "SomeText",  
income: "SomeText" , reason\_accepted: "SomeText" }

#### Response:

A2a - If request data validation success

Header: Response code: 200

```
Body: { "message": "Request data validation sent
successful" }
A2b - If invalid token
Header: Response code: 401
Body: { "message": "Unauthorized user" }
```

### **Scenario: Get society data validation**

Request:

```
URL: [domain]/api/v1/validations
Params:
Method: GET
Header: { Authorization: Bearer xxxxxx }
Body:
```

Response:

```
A2c - If success
Header: Response code: 200
Body: {
  "validation": {
    "id": 1,
    "status": "pending"|"accepted"|"rejected",
    "job": "SomeText"|null,
    "job_description": "SomeText"|null,
    "income": "SomeText"|null,
    "reason_accepted": "SomeText"|null,
    "validator_notes": "SomeText"|null,
    "validator": { VALIDATOR }|null
  }
}
```

```
A2d - If invalid token
Header: Response code: 401
Body: {"message": "Unauthorized user"}
```

## Instalment

When the validation data has been accepted by the validator and society will apply for instalment cars, the society can choose the cas based on the income that has been entered during data validation. List of available cars at each brand should also be displayed.

In the car's detail, it can calculate the price to be paid each month.

### **Specifications:**

Feature: A3 - Instalment: As a society, I want to see a list of Instalment cars.

#### **Scenario: Get all Instalment cars**

Request:

URL: [domain]/api/v1/instalment\_cars

Params:

Method: GET

Header: { Authorization: Bearer xxxxxx }

Body:

Response:

A3a - If success

Header: Response code: 200

Body: {

```
  "cars": [
    {
      "id": 1,
      "car": "Toyota FT 86",
      "brand": "Toyota",
      "price": "9000000000",
      "description": "Toyota FT 86 car is the best",
      "available_month": [
        {
          "month": 12,
          "description": "12 Months",
        },
        ...,
      ]
    }
  ]
```

```

        },
        ...,
    ]
}
A3b - If invalid token
Header: Response code: 401
Body: { "message": "Unauthorized user" }

```

### Scenario: Get Instalment detail by instalment ID

#### Request:

```

URL: /api/v1/instalment_cars/<id>
Params: { id }
Method: GET
Header: { Authorization: Bearer xxxxxx }
Body:

```

#### Response:

```

A3c - If success
Header: Response code: 200
Body: {
    "instalment": {
        "id": 1,
        "car": "Toyota FT 86",
        "brand": "Toyota",
        "price": "9000000000",
        "description": "Toyota FT 86 car is the
                        best",
        "available_month": [
            {
                "month": 12,
                "description": "12 Months",
            },
            ...,
        ]
    },
}

```

A3d - If invalid token

Header: Response code: 401

Body: { "message": "Unauthorized user" }

## Applying for instalment

The society can apply for an Instalment if the validation data has been accepted by the validator.

Application for an Instalment can only be once.

Instalment ID and position must be filled.

### Specifications:

Feature: A4 - Applying for Instalment: as a society, i want to applying for Instalment.

#### **Scenario: Applying for instalment**

Request:

URL: /api/v1/applications

Params:

Method: POST

Header: { Authorization: Bearer xxxxxx }

Body: { instalment\_id: 1, months: 12, notes : "SomeText" }

Response:

A4a - If success

Header: Response code: 200

Body: { "message": "Applying for Instalment successful" }

A4b - If invalid token

Header: Response code: 401

Body: { "message": "Unauthorized user" }

A4c - If the society validation data hasn't accepted by validator

Header: Response code: 401

Body: { "message": "Your data validator must be accepted by validator before" }

A4d - If invalid fields

Header: Response code: 401

```
Body: {
  "message": "Invalid field",
  "errors": {
    "instalment_id": [
      "The instalment id field is required."
    ],
    "months": [
      "The months field is required."
    ]
  }
}
```

A4e - If have been 2x applying

Header: Response code: 401

Body: { "message": "Application for a instalment can only  
be once" }

#### **Scenario: Get all of society instalment applications**

Request:

URL: [domain]/api/v1/applications

Params:

Method: GET

Header: { Authorization: Bearer xxxxxxxx }

Body: Response:

A4f - If success

Header: Response code: 200

```
Body: {
  "instalments": [
    {
      "id": 1,
      "car": "Toyota FT 86",
      "brand": "Toyota",
      "price": "9000000000",
      "description": "Toyota FT 86 car is the  
best",
      "applications": [
```



```

    {
      "month": "12",
      "nominal": "75000000",
      "apply_status":
        "pending"|"accepted"|"rejected",
      "notes": "I want this cars",
    },
    ...,
  ]
},
...,
]
}

```

A4g - If invalid token

Header: Response code: 401

Body: { "message": "Unauthorized user" }

## POSTMAN Collection

**You have to create a postman collection** to check the API that has been created. An example is as follows:

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>Installment Cars           <ul style="list-style-type: none"> <li>Authentication               <ul style="list-style-type: none"> <li>POST A1a - Login success</li> <li>POST A1b - Login failed</li> <li>POST A1c - Logout success</li> <li>POST A1d - Logout failed</li> </ul> </li> <li>Request Data Validation               <ul style="list-style-type: none"> <li>POST A2a - Request validation success</li> <li>POST A2b - Request validation invalid token</li> </ul> </li> <li>Get the Validation               <ul style="list-style-type: none"> <li>GET A2c - Get validation success</li> <li>GET A2d - Get validation invalid token</li> </ul> </li> <li>Installment               <ul style="list-style-type: none"> <li>GET A3a - Get all Installment cars</li> <li>GET A3b - Get all Installment cars invalid token</li> </ul> </li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Installment Detail           <ul style="list-style-type: none"> <li>GET A3c - Get detail installment cars</li> <li>GET A3d - Get detail Installment cars invalid token</li> </ul> </li> <li>Applying for installment           <ul style="list-style-type: none"> <li>POST A4a - Applying for installment success</li> <li>POST A4b - Applying for installment invalid token</li> <li>POST A4c - If the society validation hasn't accepted by validator</li> <li>POST A4d - Invalid field</li> <li>POST A4e - If 2nd apply</li> </ul> </li> <li>Get all installment applications           <ul style="list-style-type: none"> <li>GET A4f - Get all installment applications success</li> <li>GET A4g - Get all installment applications invalid token</li> </ul> </li> </ul> |
|--|--|

## Phase two - Society instalment Cars Platform (Frontend)

In this phase, you can use the gui template provided in the media files to build a society platform. Use the REST API following the REST API you created before.

Implement REST API into the frontend. All response formats must be in JSON form.

## Society login and logout

To be able to enter the system, the society must first login using the ID card number and password. When the society has entered the system, the logout button will appear, and the society can exit the system by clicking the logout button

### Specifications:

Feature: B1 - Society login and logout: as a visitor, i want to login into society instalment cars platform and logout to exit the system.

#### **Scenario: B1a - Society login success**

Given I am on the login page

And I enter correct id\_card\_number and password

Then I redirected to society dashboard page

#### **Scenario: B1b - Society login fails**

Given I am on the login page

And I enter wrong id\_card\_number or password

Then I stay in the login page and I see error message "ID Card Number or Password incorrect"

**Scenario: B1c - Society logout success**

Given I am on the any page that has been logged in

And I press logout button

Then I get message "logout success" and redirected to login page

And I cannot reach the previous page by going back

## **Society Dashboard**

In the dashboard page, there are two sections, data validation and instalment cars section. where the society must request a data validation and the data validation is approved by the validator to be able to register for instalment cars application.

**Specifications:**

**Feature: B2 - Society Dashboard:** as a society, i want to see data validation info and my instalment applications list in the dashboard page.

Installment Cars

Marsito Kusmawati Logout

Dashboard

My Data Validation

Data Validation

+ Request validation

My Installment Cars

Your validation must be approved by validator to Installment Cars.

**Scenario: B2a - Data validation section is displayed**

Given I am on dashboard page

Then I see the data validation section with "My Data validation" title

**Scenario: B2b - Link to request data validation appears when society hasn't data validation before**

Given I am on dashboard page

And I haven't request data validation before

Then I see request data validation link in the data validation section

**Scenario: B2c - Show data validation info**

| Data Validation |               |
|-----------------|---------------|
| Status          | Accepted      |
| Job             | Programmer    |
| Income/Month    | Rp. 3.000.000 |
| Validator       | Usman M.Ti    |
| Validator Notes | siap kerja    |

Given I am on dashboard page

And my request data validation is sent or accepted/rejectedd by validator

Then I see data validation info in the data validation section

**Scenario: B2d - instalment cars application list section is displayed**

Given I am on dashboard page

Then I see the instalment cars application list section with "instalment applications" title

**Scenario: B2e - Show instalment cars application info message**

**Given I am on dashboard page**

And I haven't request data validation before

Then I see "Your data validation must be approved by validator to get the applying instalment" in the instalment cars application list section

**Scenario: B2f - The car instalment application is displayed when society data validation have been accepted by validator**

#### My Installment Cars

+ Add Installment Cars

Given I am on dashboard page  
And I my request data validation has been accepted by validator  
Then I see the instalment cars application with link is displayed  
in the instalment cars application list section

| Toyota FT 86 |                                     |
|--------------|-------------------------------------|
| Description  | Toyota FT 86 car is the best        |
| Price        | Rp. 900.000.000                     |
| Installment  | 12 Months <span>Pending</span>      |
| Apply Date   | Desember 12, 2022                   |
| Notes        | I want this one, because i am rich. |

Given I am on dashboard page  
And my instalment cars application is finished

**Scenario: B2h - The instalment applications show instalment cars application info correctly when instalment cars application is finished**

Given I am on dashboard page  
Then I see instalment cars application info (cars, total months, apply date, notes) in the instalment cars application box

## **Request Data validation**

In the data validation request page, the society can fill in the job, job description and income if they have by selecting "Yes, I have" in the dropdown. Are you working? question and they can send a request if the reason accepted has been filled.

Specifications :

**Feature: B3 - Society Data validation: as a society, I want to request data validation.**

# Request Data Validation

Are you working? Yes, I have ▾

Your Job

describe what you do in your job

Income (Rp)

Reason Accepted

Explain why you should be accepted

Send Request

## Scenario: B3a - Data validation form is displayed correctly

When I press "Send Request" button in the dashboard page

Then I see the data validation form (job, job description, income, reason accepted) is displayed

## Scenario: B3b - Request data validation successful

Given I am on request data validation page

And I press request button

Then the request data validation is sent, the "Request data validation successful" message is appear, and I redirected to dashboard page

## instalment Cars List

When the society registers for instalment cars application by pressing the "Add instalment cars application" button on the dashboard page, the society is directed to the list instalment Cars page to select instalment Cars. In the item instalment Cars, display the applying instalment available in those cars correctly.

Specifications :

**Feature: B4 - instalment Cars List:** as a society, I want to see a list of all instalment Cars.

| Installment Cars                             |  |  | Marsito Kusmawati             | Login |
|--|--|--|-------------------------------|-------|
| Cars   |  |  |                               |       |
| List of Cars                                 |  |  |                               |       |
| Toyota FT 86<br>Toyota FT 86 car is the best |  | Available Month<br>12 Months, 24 Months, 48 Months | Detail                        |       |
| Nissan Livina<br>Family Cars for everyone    |  | Available Month<br>12 Months, 24 Months            | Vacancies have been submitted |       |
| Toyota FT 86<br>Toyota FT 86 car is the best |  | Available Month<br>12 Months, 24 Months, 48 Months | Detail                        |       |

**Scenario: B4a - Show list instalment Cars**

Given I am on instalment Cars list page

Then I see a list of instalment Cars

**Scenario: B4b - Show information for each instalment Cars**

Given I am on instalment Cars page

Then I see instalment information (car name, description, available month) in each instalment item.

**Scenario: B4c - instalment item unavailable when the instalment has been apply before.**

## Detail instalment

In the instalment detail page, there are details of instalment shown like car name, address, car description, available months. Society can apply instalment by filling months and notes for application.

# Toyota FT 86

Brand : Toyota

## Description

Toyota FT 86 car is the best

Price : **Rp. 900.000.000**

## Select Months

12 Months

Nominal/Month : **Rp. 10.000.000**

Notes

Explain why your installment should be approved

Apply

## Specifications :

**Feature: B5 - Detail Instalment:** as a society, I want to see details of Instalment and see available months.

### Scenario: B5a - Information displays correctly

Given I am on instalment detail page

Then I see the section with available months and calculate the price to be paid each month.

### Scenario: B5b - Can apply for a instalment if the income equal or exceed the calculation per month

Given I am on instalment detail page

Then I see available months and calculate the price to be paid each month

### Scenario: B5c - Register instalment cars application

Given I am on instalment detail page



I choose total months

I fill the Notes for instalment field

And I press "Apply" button

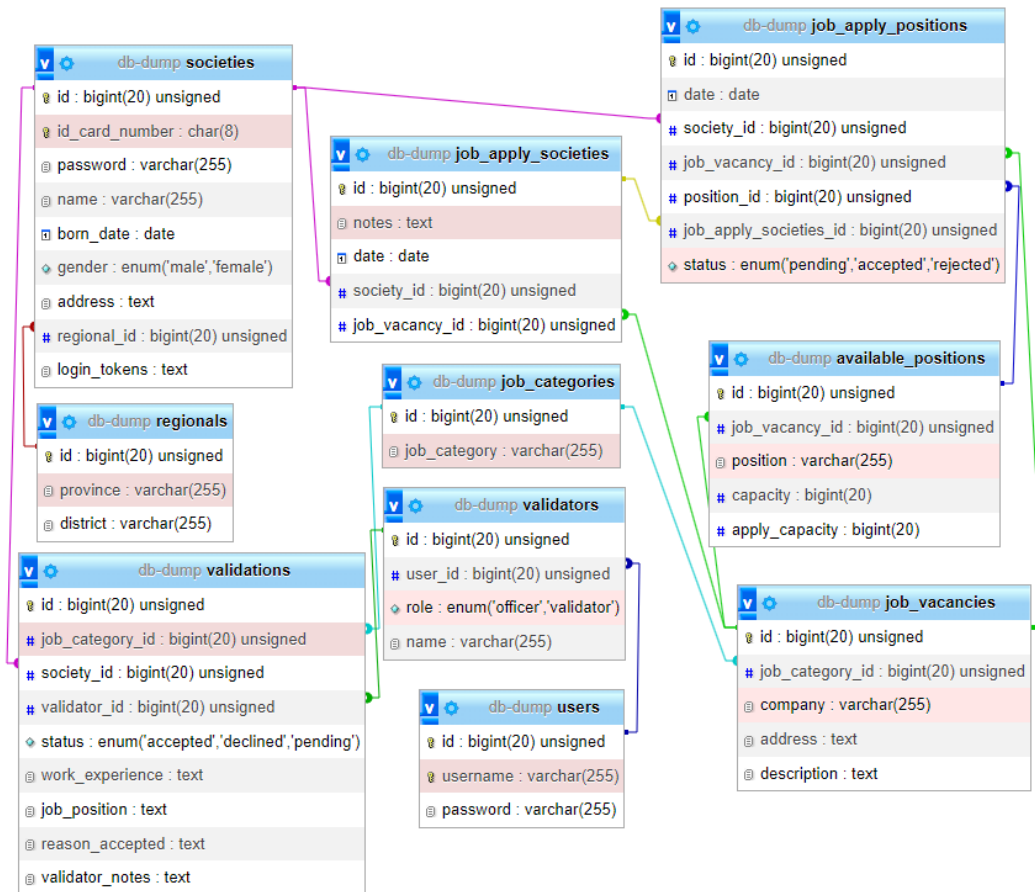
Then the success or error message is appear and I redirected to dashboard page

**Notes:**

- For each response from the REST API must be displayed.
- Build the frontend into production mode first before your frontend project is pushed and the REST API must be consumed from your API before.

## ERD

You can make your own ERD according to your needs. bellow is an example of ERD:



## INSTRUCTION FOR COMPETITORS

- You may create additional endpoints if necessary, but you must fulfil all of the requirements listed above.
- You can add additional fields to the response body if needed, but ensure that all required fields are included and the structure is displayed correctly.
- Create a root folder called **XX\_SERVER\_MODULE** in your local computer, where **XX** is your computer number.
- **Created Postman Collection, Database (db-dump.sql) and ER diagram (db-diagram.pdf)** should be exported and saved under the root folder **<host>/XX\_SERVER\_MODULE**
- REST API should be reached on **<host>/XX\_SERVER\_MODULE/BACKEND** where **xx** is PC number. No port and no /public suffix path.
- Frontend app should be reached on **<host>/XX\_SERVER\_MODULE/FRONTEND**.
- Zip root folder **XX\_SERVER\_MODULE** and submit to the submission page. Make sure to exclude the **vendor** and **node\_modules** folder when zipping files.