

**Capstone Project Report**

**Report 4 – Software Design Document**

– Hanoi, August 2019 –

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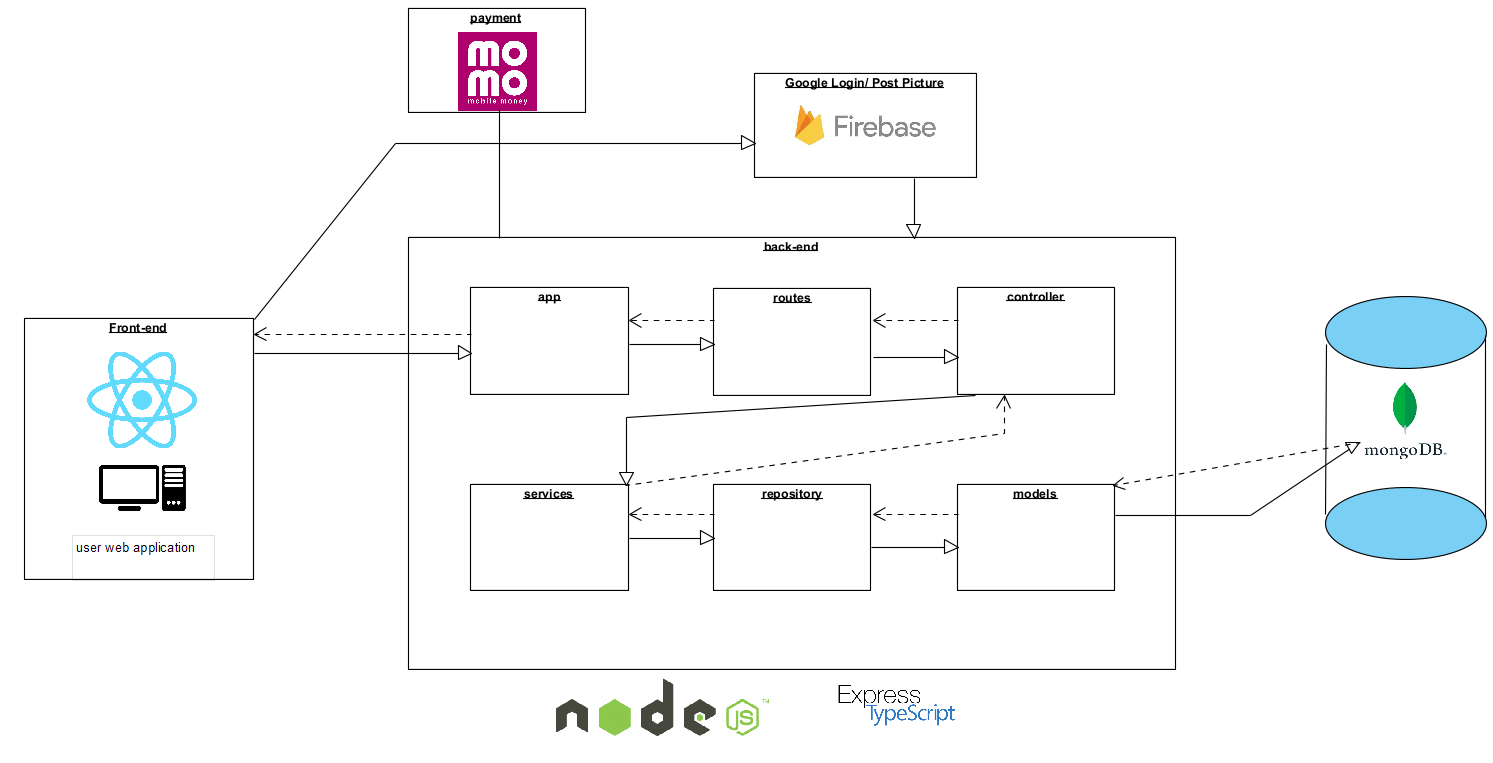
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# I. Software Design Document

## 1. System Design

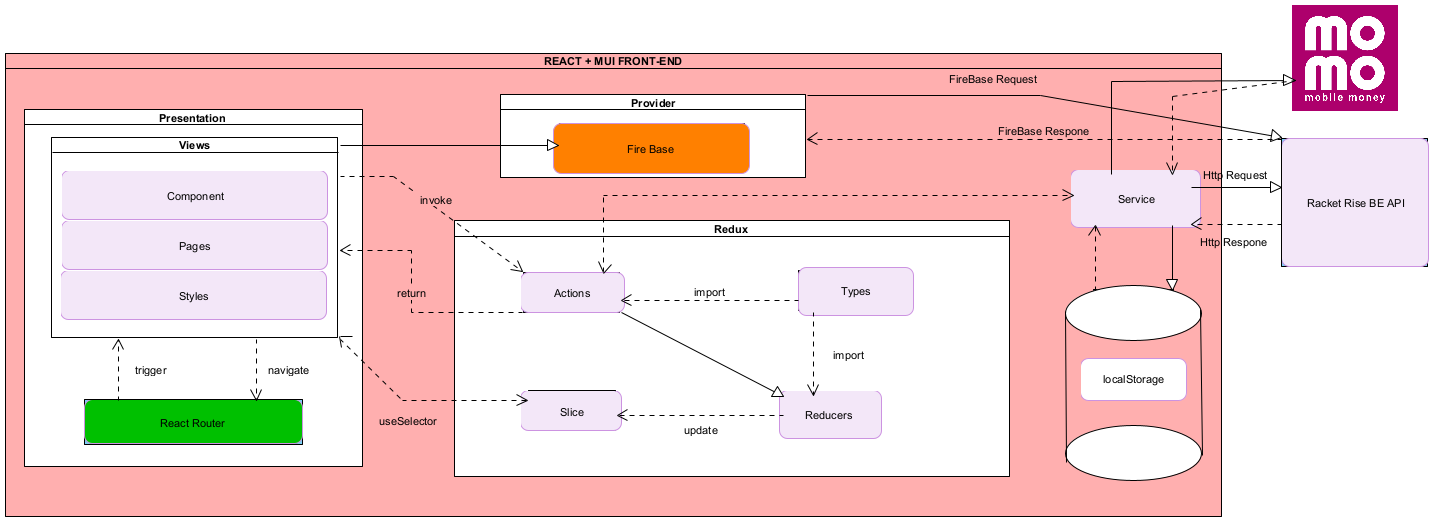
### 1.1 System Architecture

#### Overall System Architecture

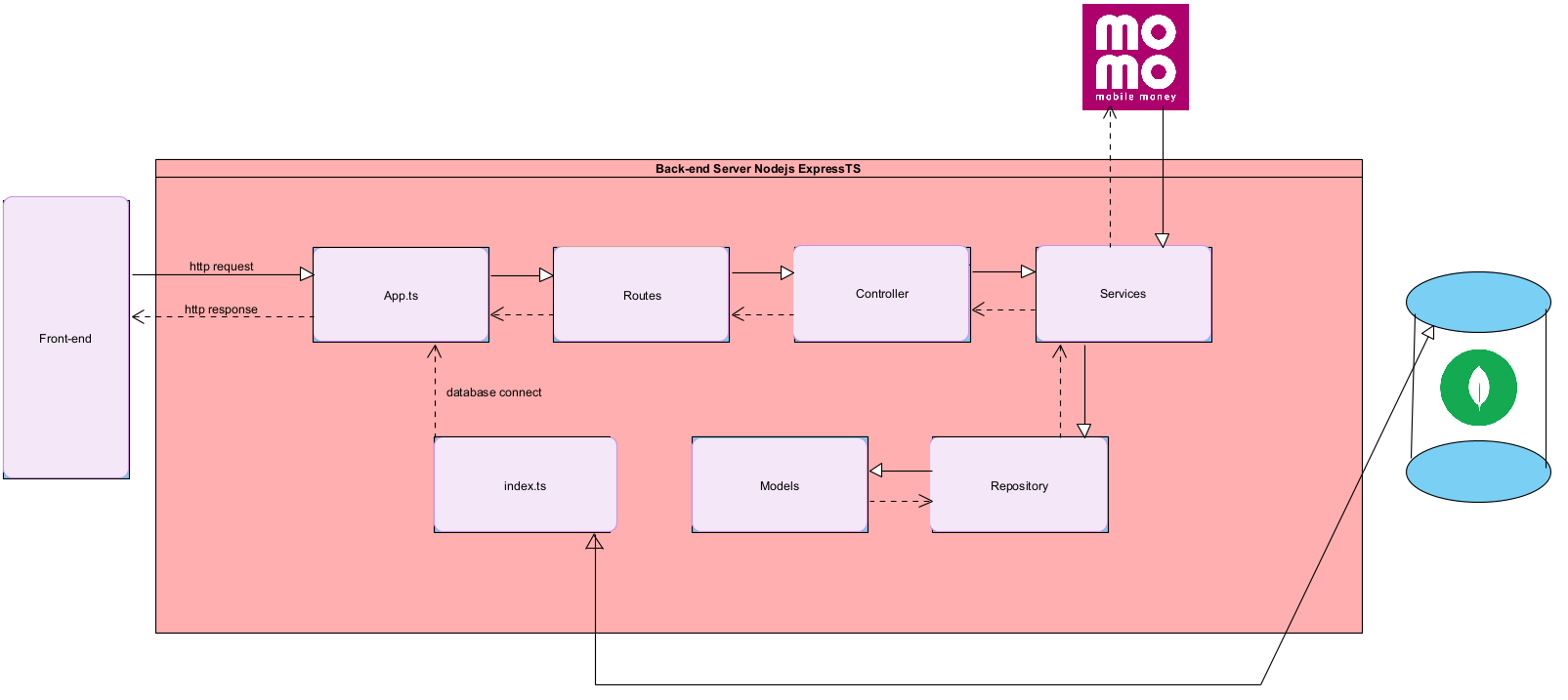


#### 1.1.2 Detail System Architecture

##### 1.1.2.1 User Web Application Sub-system (Front-end)



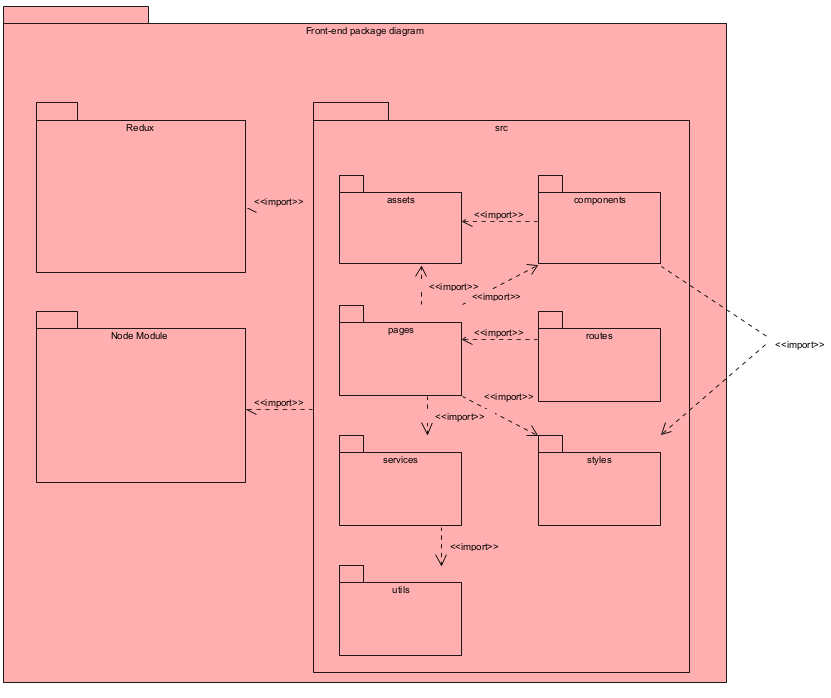
##### 1.1.2.2 Backend WebAPI Sub-system



### 1.2 Package Diagram

*[Provide the package diagram for each sub-system. The content of this section includes overall package diagram(s) and the explanation for each package (or namespace). Please see the sample and description table format below]*

#### 1.2.1 Front-end Package Diagram



***Package Descriptions***

|  |  |  |
| --- | --- | --- |
| **No** | **Package** | **Description** |
| 01 | Redux | This package manages the application's state using Redux, a predictable state container for JavaScript apps. It includes actions, reducers, and middleware to handle state changes and side effects. |
| 02 | Node Module | This folder contains static assets like images, fonts, and other media files used in the application. |
| 03 | src | The main source directory that houses the core of the application's codebase. It includes all the sub-packages and modules necessary for the application to function. |
| 04 | src/assets | This folder contains static assets like images, fonts, and other media files used in the application. |
| 05 | src/components | This package includes reusable UI components. Each component represents a piece of the user interface, such as buttons, header, footer, input fields, and other interactive elements. |
| 06 | src/pages | This package contains page-level components that represent different views or screens in the application. Each page is usually tied to a route and may contain multiple smaller components. |
| 07 | src/routes | This package manages the routing configuration of the application. It defines the various routes and their corresponding components or pages, enabling navigation within the app. |
| 08 | src/services | This package includes service modules responsible for handling API calls, data fetching, and other asynchronous operations. It abstracts the logic for interacting with external services. |
| 09 | src/styles | This package contains global and component-specific styles, including CSS, SCSS, or styled-components. It manages the overall look and feel of the application. |
| 10 | src/utils | This package provides utility functions and helper methods used throughout the application. These utilities perform common tasks such as data formatting, calculations, and other reusable logic. |

## 2. Database Design

*[Provide the files description, database table relationship & table descriptions like example below]*



***Table Descriptions***

|  |  |  |
| --- | --- | --- |
| **No** | **Table** | **Description** |
| *01* | *<Table name>* | *<Description of the table>*  *- Primary keys: <<list of primary key fields>>*  *- Foreign keys: <<list of foreign key fields>>* |
| *02* | *<Table name2>* | *…* |

## 3. Detailed Design

### 3.1 <Feature/Function Name1>

*[Provide the detailed design for the feature <Feature Name1>. It includes Class Diagram, Class Specifications, and Sequence Diagram(s);* ***For the features/functions with the same structure of class & sequence diagrams, you need to provide the diagrams once for one feature/function and refer to those diagrams from other features/functions****]*

#### 3.1.1 Class Diagram

*[This part presents the class diagram for the relevant feature]*



***3.1.2 <Sequence Diagram Name1>***

*[Provide the sequence diagram(s) for the feature, see the sample below]*



#### 3.1.3 <Sequence Diagram Name2>

#### 3.1.4 …

### 3.2 <Feature/Function Name2>

…