

**Capstone Project Report**

**Report 3 – Software Requirement Specification**

– Hanoi, August 2019 –

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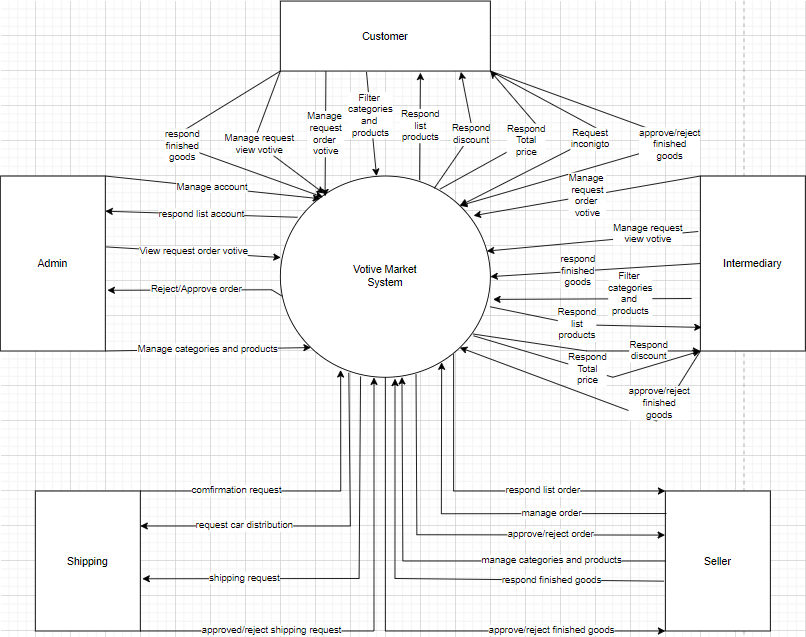
# I. Record of Changes

|  |  |  |  |
| --- | --- | --- | --- |
| Date | A\* M, D | In charge | Change Description |
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\*A - Added M - Modified D - Deleted

# II. Software Requirement Specification

## 1. Product Overview



## 2. User Requirements

## 2. User Requirements

### 2.1 Actors

|  |  |  |
| --- | --- | --- |
| **#** | **Actor** | **Description** |
| 1 | Admin | A person who has the highest permission level and is responsible for managing the website. |
| 2 | Guest | The user has not yet registered an account. |
| 3 | Customer | The user that has registered an account. |
| 4 | Intermediary | The role center between client and shop |
| 5 | Seller | Seller is a registered user with an email account and they own a web store |
|  |  |  |
|  |  |  |

### 2.2 Use Cases

#### 2.2.1 Diagram(s)

#### 2.2.2 Descriptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Use Case** | **Primary Actor** |  | **Secondary Actor** |
| 01 | Sign-up | Guest |  | N/A |
| 02 | View Product | Guest |  | Customer |
| 03 | Search Product | Guest |  | Customer |
| 04 | Detail Product | Guest |  | Customer |
| 05 | Sign in | Customer |  | N/A |
| 06 | Sign out | Customer |  | N/A |
| 07 | View profile info | Customer |  | Intermediary |
| 08 | Change password | Customer |  | Intermediary |
| 09 | Update profile | Customer |  | Intermediary |
| 10 | Update address | Customer |  | Intermediary |
| 11 | Add product to cart | Customer |  | Intermediary |
| 12 | Cart management | Customer |  | Intermediary |
| 13 | Order management | Customer |  | Intermediary |
| 14 | Product reviews | Customer |  | Intermediary |
| 15 | Custom product | Customer |  | Intermediary |
| 16 | Feedback information | Customer |  | Intermediary |
| 17 | View dashboard | Admin |  | N/A |
| 18 | Sign in | Admin |  | N/A |
| 19 | Sign out | Admin |  | N/A |
| 20 | Customer management | Admin |  | N/A |
| 21 | Personal profile management | Admin |  | N/A |
| 22 | Account manager | Admin |  | Seller |
| 23 | View Data – Statistics | Admin |  | N/A |
| 24 | Seller management | Admin |  | N/A |
| 25 | Order management | Admin |  | N/A |
| 26 | Manage comments and feedback | Admin |  | N/A |
| 27 | Update shop information | Seller |  | N/A |
| 28 | Add items to the shop | Seller |  | N/A |
| 29 | Update items | Seller |  | N/A |
| 30 | Delete items | Seller |  | N/A |
| 31 | View list order | Seller |  | N/A |
| 32 | View detail order | Seller |  | N/A |
| 33 | Approve order | Seller |  | N/A |
| 34 | Reject order | Seller |  | N/A |
| 35 | Contact customers | Seller |  | N/A |
| 36 | View custom product | Seller |  | N/A |
| 37 | Sign in | Intermediary |  | N/A |
| 38 | Sign out | Intermediary |  | N/A |
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**UC-01**

|  |  |  |  |
| --- | --- | --- | --- |
| ID and Name | Sign up | | |
| Created By: | Bùi Anh Tuấn | Date Created: | 3/6/2022 |
| Primary Actor: | Guest | Secondary Actors: | N/A |
| Description: | Sign up for an account on the system. | | |
| Trigger: | Users want to register an account. | | |
| Pre-conditions: | 1. User does not have an account 2. No user account yet 3. The user's device is already connected to the internet when logging in | | |
| Post-conditions: | When the normal process completes successfully, a new account will be created with the desired user role and saved to the database. | | |
| Normal flow: | 1. Go to Home Page. 2. Click “Đăng ký” 3. System displays “Sign Up” form. 4. Input username, email, password, confirm password, select account type 5. Clicks “Đăng ký” button. 6. System displays a toast success message. 7. Redirect to Login Screen. | | |
| Alternative Flows: | N/A | | |
| Exceptions: | The system displays an error message when:   1. Not input all fields in the “Sign Up” form 2. Email existed 3. Cannot connect to the server | | |
| Priority: | High | | |
| Frequency of User: | High | | |
| Business Rules: | N/A | | |
| Other Information: | N/A | | |
| Assumptions: | N/A | | |

**UC-02**

|  |  |  |  |
| --- | --- | --- | --- |
| ID and Name | View Product | | |
| Created By: | Bùi Anh Tuấn | Date Created: | 3/6/2022 |
| Primary Actor: | Guest | Secondary Actors: | Customer |
| Description: | View all product | | |
| Trigger: | The users want to view product | | |
| Pre-conditions: | N/A | | |
| Post-conditions: | N/A | | |
| Normal flow: | 1. Go to Home Page | | |
| Alternative Flows: | N/A | | |
| Exceptions: | The system displays an error message when:   1. Cannot connect to the server | | |
| Priority: | Normal | | |
| Frequency of User: | Normal | | |
| Business Rules: | N/A | | |
| Other Information: | N/A | | |
| Assumptions: | N/A | | |

## 3. Functional Requirements

### 3.1 System Functional Overview

*[Provide functionality overview of software system: screen flow, screen descriptions, system user roles, screen authorization, non-screen functions, ERD]*

#### 3.1.1 Screens Flow

*[This part shows the system screens and the relationship among screens. You can draw the Screens Flow for the system in the form of diagram as below. Please note that beside the normal flat screen, we might have the oval notation for pop-up screen (Import Order) or a screen with multiple information tab (Order Details), etc. You may also use text or background format for different visuality purpose]*



#### 3.1.2 Screen Descriptions

*[Provide the descriptions for the screens in the Screens Flow above]*

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Feature** | **Screen** | **Description** |
| 1 | Order Meals | Create Order | <<Screen Brief description>> |
| 2 | Order Meals | Change Order |  |
| 3 | .. |  |  |

#### 3.1.3 Screen Authorization

*[Provide the system roles authorization to the system features (down to screens, and event to the screen activities if applicable) in the table form as below – replace Role1, Role2,… with your specific system user role names]*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Screen** | **Role-Name1** | **Role-Name2** | **Role-Name3** | **…** |
| <<Screen Name1>> | X |  | X | X |
| <<Screen Activity>> |  |  | X | X |
| <<Screen Name2>> | X |  | X |  |
| Query All Data | X |  |  |  |
| Query Own Data |  |  | X |  |
| Query Managed Data |  |  | X |  |
| Add New Data |  |  | X | X |
| Update All Data |  |  |  | X |
| Update Own Data |  |  |  | X |
| Update Managed Data |  |  |  | X |
| Delete Data |  |  |  |  |
| … |  |  |  |  |

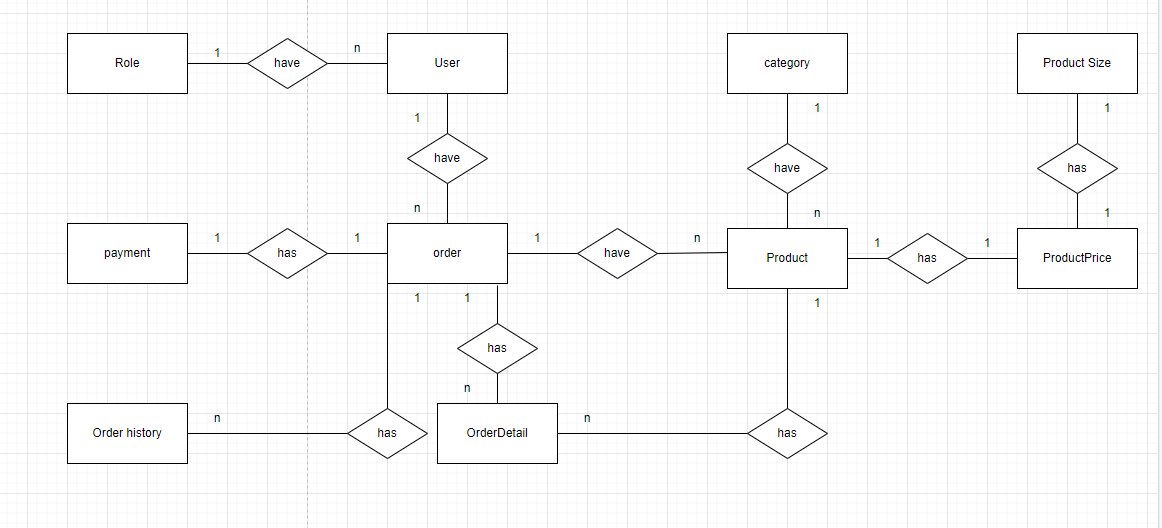
#### 3.1.4 Non-Screen Functions

*[Provide the descriptions for the non-screen system functions, i.e batch/cron job, service, API, etc.]*

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Feature** | **System Function** | **Description** |
| 1 | <<Feature Name>> | <<Function Name1>> | <<Function Name1 Description>> |
| 2 | … |  |  |

#### 3.1.5 Entity Relationship Diagram

*[Provide the entity relationship diagram and the entity descriptions in the table format as below]*



**Entities Description**

|  |  |  |
| --- | --- | --- |
| **#** | **Entity** | **Description** |
| 1 | User | That use interface |
| 2 | Role | Seller,admin,user …. |
| 3 | Order | That view order |
| 4 | Order Detail | Information of order |
| 5 | Order history | That use view history |
| 6 | Payment | That use payment |
| 7 | Product | Product information |
| 8 | Product Price | Price of product |
| 9 | Product Size | Size of product |
| 10 | Category | Type product |

### 3.2 <<Feature Name 1>>

#### 3.2.1 <<Function Name 1>>

*[A function can be a screen or a non-screen function (listed in the part 3.1.5 above). In this part, you need to provide the details on the related function, focus on mentioning below information*

* *Function trigger: how this function is triggered (navigation path, a timing frequency, etc.*
* *Function description: actors/roles, purpose, interface, data processing, etc.*
* *Screen layout: mock-up prototype of the screen, sample below is for Manage Products screen*

**

* *Function Details: provide explanation for the data, validation, business rules, functionalities (for both normal cases and abnormal cases), etc. of the function so that the reader can image how it work.*

*]*

#### 3.2.2 <<Function Name 2>>

…

### 3.3 <<Feature Name 2>>

…

## 4. Non-Functional Requirements

4.1 External Interfaces

#### 4.1.1.User interfaces

**UI-1**: The web application display shall conform to the user and provide a friendly interface.

**UI-2**: The font size is easy to distinguish where is the title, where is the content.

**UI-3**: Consistent interface: font size, font, color, the logo must be in sync.

**UI-4**: The web application will support responsive screens on mobile, tablet, and desktop Quality Attributes

#### 4.2.1 Usability

**USA-1**: The steps and flows are short and easy to understand so that users can interact with the application without training.

**USA-2**: The user interface is clean, friendly, and consistent from the layout, component to the

button, text field.

**USA-3**: The input action is flexible with both keyboard and mouse.

**USA-4**: Error and warning messages are simple.

#### 4.2.2 Reliability

#### 4.2.3 Performance

* Reduce as less as possible query to database in loop
* Resource utilization: use very few computer resources such as ram, memory, CPU.

#### 4.2.4 Dependence

##### 4.2.4.1. Security

- Only the Admin account has access to system management.

- The system does not allow users who are not FPT University students to register for an account on the system but with other roles as recruiters and sellers.

- The recruiter role will not be able to sell and the seller role will not be able to post job vacancies.

- The system uses spring security to classify the user type for the system.

##### 4.2.4.2 Safety

- The password of the account is encrypted since creating a moment.

- The password should be hidden in the client.

#### 4.2.5 Supportability

- The account's password must be MD5 encrypted

- Named according to the Coding Convention

#### 4.2.6 Design Constraints

The back-end programming language is .NET

Front-end programming language is ReactJS

## 5. Requirement Appendix

### 5.1 Business Rules

|  |  |
| --- | --- |
| **ID** | **Description** |
|  | The email address must be valid |
|  | Password must be at least 8 characters in length |
|  | Password must be encrypted |
|  | When registering or changing a password, the user must enter the new password twice |
|  | A guest cannot register with a username and email that has already been registered |
|  | User cannot update their email once it has been registered |
|  | When changing a password, the new password must not be the same as the current password |
|  | Format of date must be “dd/mm/yyyy” |
|  | When an account is registered, the user must choose their roles |
|  | Email is unique and cannot be duplicated in the database |
|  | Format of money must be “10.000” |
|  | Format DateTime of comment restaurant must be “dd-MMM-yyyy HH:mm:ss” |
|  | User must provide their email and password when logging into the website |
|  | When updating the profile, the phone number is unique and cannot be duplicated in the database |
|  | The deadline of request when creating or updating must be in the future |
|  | After creating or re-opening a request to find a job or recruitment, the status of the request is PENDING |
|  | Students can repost a request find a job when the request’s status is COMPLETE or EXPIRED |
|  | A recruiter can repost request recruitment when the request’s status is COMPLETE or EXPIRED |
|  | Students can only apply for job postings when the job posting's status is APPROVED |
|  | A recruiter can only hire workers when the find job posting's status is APPROVED |
|  | When deleting posts that are not " APPROVED" status, the posts on the homepage are not deleted |
|  | When add, update or report, the blanks must be filled in completely. |

### 5.2 Common Requirements

### 5.3 Application Messages List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Message code** | **Message Type** | **Context** | **Content** |
|  | MSG01 | In red, Toast Message | Wrong account | Email hoặc mật khẩu không chính xác. |
|  | MSG02 | In green, Toast Message | Logout success | Đăng xuất thành công. |
|  | MSG03 | Toast Message | Notify actions | Bạn phải hoàn thành ít nhất một đơn hàng trước khi đánh giá cửa hàng. |
|  | MSG04 | Toast Message | Notify actions | Không thẻ xóa thẻ này vì thẻ này đang được sử dụng. |
|  | MSG05 | Toast Message | Notify actions | Cập nhật mật khẩu mới thành công! |
|  | MSG06 | Toast Message | Notify actions | Có lỗi xảy ra. Vui lòng thử lại. |
|  | MSG07 | Toast Message | Notify actions | Mật khẩu cũ không đúng! |
|  | MSG08 | Toast Message | Notify actions | Mật khẩu xác nhận không giống với mật khẩu mới! |