**SOFTWARE DESIGN SPECIFICATION**



**SRM System**

**HIT Team**

Consulting

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Staffing

Support

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Table of Contents

[1. Introduce 4](#_Toc331965316)

[1.1. Purpose of Document 4](#_Toc331965317)

[1.2. Definitions and Acronyms: 4](#_Toc331965318)

[1.3. References: 4](#_Toc331965319)

[1.4. Document Scope 4](#_Toc331965320)

[1.5. Document Audiences 4](#_Toc331965321)

[2. System Context 6](#_Toc331965322)

[2.1. Physical Perspective 6](#_Toc331965323)

[2.2. Static Perspective 7](#_Toc331965324)

[2.3. Decompose Level 2 (Dynamic) 8](#_Toc331965325)

[3. Sequence Diagram 9](#_Toc331965326)

[3.1. Login 9](#_Toc331965327)

[3.2. Log out 11](#_Toc331965328)

[3.3. Change Password 13](#_Toc331965329)

[3.4. Create new user account 15](#_Toc331965330)

[3.5. Edit account information 18](#_Toc331965331)

[3.6. Reset accout 19](#_Toc331965332)

[3.7. Disable/enable account 21](#_Toc331965333)

[3.8. Assign Authorize: 22](#_Toc331965334)

[3.9. Use case show accounts by list 24](#_Toc331965335)

[3.10. Analysis Statistic 25](#_Toc331965336)

[3.11. Student record data 26](#_Toc331965337)

[3.12. Update and Print student’s records: 27](#_Toc331965338)

[3.13. Search/View list student records 30](#_Toc331965339)

# Introduce

## Purpose of Document

The purpose of the Design Document (DD) is to deﬁne the detailed design for all components of the Student Record Management system which are speciﬁed in the SRS and SAS and detail the functionality which will be provided by each component or group of components and show how the various components interact in the design

This document is not intended to address installation and configuration details of the actual implementation. Installation and configuration details are provided in technology guides produced during the course of project.

The intended audiences for this document are SRM Stakeholders, the project development teams, technical architects, database designers, testers.

This document will be updated and refined based on changing requirements

## Definitions and Acronyms:

|  |  |  |
| --- | --- | --- |
| No | Glossary | Description |
| 1 | DD | Detailed Design |
| 2 | SRM | Student Record Management |
| 3 | SRS | Software Requirements Specification |
| 4 | SAS | Software Architecture Specification |
| 5 | EF | Entity Framework |

Table 1: Definitions and Acronyms

## References:

|  |  |
| --- | --- |
| No | Document |
| 1 | Software Coding Standard |
| 2 | SRM Software Architecture Specification |
| 3 | SRM Data Entities |
| 4 | SRM Software Requirements Specification |

Table 2: References

## Document Scope

This document only describes system high level architectural design. The describe about database and detail design will be perform in another documents

## Document Audiences

This document used by Project Manager, QA Manager, Architecture Designer.

**Table 1: Document audience**

|  |  |  |
| --- | --- | --- |
| No | Readers | Reason for reading |
| 1 | QA Manager | Check document format |
| 2 | PM | Check document’s perform progress |
| 3 | Architecture Designer | Perform the architecture design |

# System Context

## Physical Perspective

## Static Perspective

Package ch?a các

class để xử lý

business cho **CRS**

Package chứa các

entity class để trao

đổi data giữa các

layer

Package chứa các

class để xử lý thao

tác file, database...

**SRM.GUI**



**SRM.Business**



«Import»

**SRM.DataAccess**



«Import»

**SRM.DataObjects**



«Import»

«Import»

«Import»

|  |  |
| --- | --- |
| Elements | Responsibility |
| **SRM GUI** | Các class tương ứng với từng màn hình (form) thuộc phân hệ |
| **SRM.Business** | Các class thuộc Business Layer có chức năng xử lý các business rule từ những request từ client |
| **SRM.DataAccess** | Các class thuộc DB Access Layer có chức năng tiếp nhận các request đến DB từ Business Layer và tạo các connections và thực hiện DB tractions |
| **SRM.DataObjects** | Class tạo ra những data object chứa dữ liệu luân chuyển giữa các layers với nhau. |

## Decompose Level 2 (Dynamic)

# Sequence Diagram

## Login

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | User fill in the Username | Username user fills in the login interface |
| 2 | User fill in the Password | User fill in the Password |
| 3 | selects "login" | To log into the system after filling username and password the user selects "login". |
| 4 | Check the information is valid? | Inspection system username and password. |
| 5 | Appears interface "Student Records Management" | Username and password correct interface system appears "Student Records System Management" |
| 6 | Interface appears the message "Password is not correct" | If the wrong username name or password will appear system message |
| 7 | click "close" | click "close" to close message |
| 8 | Return to login | Return to the system logging. |
| 9 | User click "Cancel" | If users do not want to sign "cancel" to exit the programs. |
| 10 | Interface appears the message "Do you really want to exit" |  |
| 11 | click “yes" | Click "yes" to exit the programs. |

## Log out

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Click the button [x] | Users want to logout from the system will select [x] |
| 2 | System will confirm the logout of the user by the message “Do you really want to exit?" | System write received operation and output show message " Are you sure to logout?" |
| 3 | selects "Yes" | The user selects "Logout" to exit the system. |
| 4 | Return to login | Return to the system log. |
| 5 | select "No" | Select "Cancel" if you want to log out of your system. |
| 6 | Return to the original interface | Return to the original interface |

## Change Password

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select change password in the file | To change the root password after you log into the system the user chooses "Change password" |
| 2 | The interface change password | The interface change password |
| 3 | User input old password | User input old password |
| 4 | User input new password | User input new password |
| 5 | User input new password again | User input new password again |
| 6 | User selects "OK" to change password | User selects "OK" to change password to change the old password. |
| 7 | Check the information is valid? | The system checks the data you entered. |
| 8 | Save the information in the database | Enter valid data, Save the information in the data valid. |
| 9 | The message " Change Password successful " | The message "Password successfully changed" |
| 10 | The system fill red confirm the password for the user to re-enter the correct | if the password does not match,the system fill red confirm the password for the user to re-enter the correct |
| 11 | The system fill red the " Old password not correct" for the user to re-enter the correct | if the current password incorrect, The system fill red the "Current password" for the user to re-enter the correct |
| 12 | User selects “Cancel” to cancel change password | if users do not want to change the password, User selects “Cancel” to cancel change password |
| 13 | Password change interface disappears. | Password change interface disappears. |

## Create new user account

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
|  | Users select user management. | User selects “user management” to begin adding new users. |
| 1 | User select "Add user" | User select "Add user" interface to appear interface "Add new user" |
| 2 | Appears interface "Add new user" | interface "Add new user" |
| 3 | User fill in account information: Username and Assign Authorize | In the "add new user" user will enter the necessary information required user name and Assign Authorize. |
| 4 | User clicks "Add" | User clicks "Add" to complete the operation. |
| 5 | Check the information is valid? | The system will check the information entered is correct? |
| 6 | Save the information in the database | If valid system will save to the database data. |
| 7 | The message " Add user successful " | The message "Create account success" |
| 8 | The message " User ID existed in the system " | If ID fails, the system will appears The message "Invalid ID" |
| 9 | Re-enter the user ID | The user will enter the new ID. |
| 10 | User clicks "Cancel" | Click "Cancel" button to cancel operation |
| 11 | Exit interface "create new user", return to the "User Management" | Exit interface "create new user", return to the "User Management" |

## Edit account information

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Users select user management | Users select user management |
| 2 | System shows a list of users is created. | System shows a list of users is created. |
| 3 | User selects to update user account information | User selects to update user account information. |
| 4 | Account information appears | Account information appears for the user to edit. |
| 5 | Edit account information | User to edit the information. |
| 6 | User click "save" | User click "save" to finish editing. |
| 7 | Save the information in the database | Just edit the information stored in databases. |
| 8 | The message Save the information success | The message Save the information success |
| 9 | User click "Cancel" | User click "Cancel" to cancel the operation. |
| 10 | Recover the original information | Recover the original information. |

## Reset accout

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Selects account need to recovery in accounts list | Selects account need to recovery in accounts list |
| 2 | Account information appears | Account information appears for the user to edit. |
| 3 | User select button "reset password" | User select button "reset password" |
| 4 | Reset password successful | The message " Reset password successful " |

## Disable/enable account

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select the account to disable / enable | User elect the account to disable / enable |
| 2 | Appears account information | Appears account information, the user edit status. |
| 3 | select disable | Select disable to close the account. |
| 4 | The message Update user information successful | The message disable successfully save to the database |
| 5 | select enable | Select enable to open the account. |
| 6 | The message Update user information successful | The message Enable successfully and save to the database |

## Assign Authorize:

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select account to Assign Authorize | User Select account to Assign Authorize |
| 2 | Appears account information | Appears user account information for authorization again. |
| 3 | User Assign Authorize | User Assign Authorize |
| 4 | click save | Click “save” to complete operation. |
| 5 | Save the information in the database | Save the information in the database |
| 6 | The message Save the information success | The message Save the information success |

## Use case show accounts by list

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | User select user management. | User select user management tab to start search |
| 2 | Choose criteria | User needs to select search criteria. |
| 3 | Enter keywords | Fill keyword to search. |
| 4 | Click button "Search" | Click the button "Search" to complete the operation |
| 5 | Filter by keyword | System to search for keywords the user entered. |
| 6 | Show results | Show results are sought. |

## Analysis Statistic

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select tab "statistics" | User statistics tab to begin operations. |
| 2 | Select Criteria | Criteria select to statistical. |
| 3 | Select button "statistics" | Select button "statistics" |
| 4 | The system displays statistics | The system displays statistics according to user selected criteria. |

## Student record data

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select Import student list | To appear interface "Import student list" , Select Import student list |
| 2 | Select Department | The user selects “Department " imported. |
| 3 | Click button Browse | To look to the file to import, click button Browse |
| 4 | Select file Import | Select file to import into the system. |
| 5 | Click button Import | Click the Import button to complete operation. |
| 6 | Save to database | The system will store the student information on valid database. |
| 7 | Show up interface. | The system will show the student is not valid |
| 8 | The message file is not valid. | The message file is not valid. |

## Update and Print student’s records:

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Select "Check records" | Users select the tab "check records" to appear Interface "check records" |
| 2 | Enter the student ID to update | Enter the student ID to update |
| 3 | select “Search" | Select “Search" to search student information. |
| 4 | Display student information. | Display student information. |
| 5 | In detail interface student records users may edit student information, by check or uncheck the box | In detail interface student records users may edit student information, by check or uncheck the box |
| 6 | click button Print | After editing information, user click button “Print” |
| 7 | The system stores the information in the database. | The system stores the information in the database. |
| 8 | the message "Save successful student record" |  |
| 9 | click "OK" | click "OK" to exit the message " Save successful student record " |
| 10 | appears interface "Print student records" |  |
| 11 | User click button “Print" | To print the information on paper. |

## Search/View list student records

****

|  |  |  |
| --- | --- | --- |
| Step | Behavior | Description |
| 1 | Choose function “search/view list student” | to start the search, users select the tab “search/view list student” |
| 2 | Users should select the search criteria | “Search interface” appears, select search by multiple users to different criteria. |
| 3 | User enter keywords | Next the user fills appropriate keywords to search |
| 4 | Click “Search” |  |
| 5 | Students list appears on the interface | The interface displays a list of students who fit the criteria to look for. |

-- The End --