**SOFTWARE REQUIREMENT SPECIFICATION**



**SRM System**

**HIT Team**

Consulting

Sales

Staffing

Support

# Information of document

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# Introduction

## Purpose

Base on the needs of student information’s management for Van Lang University, HIT Team shall provide to all customers SRM (Student Record Management) product - an advanced tool to manage student records

The SRS enumerates the deliverables and services to be provided by The Hit Team to the client, describe overview the system and detail functional and also non-functional of the SMS System. Although a signature page accompanies the document, the SRS is not a legal contract. Its intent is to level-set expectations and to build understanding of the process that the team will follow while creating deliverables.

## Document Conventions

This SRS document is written for developers to read and implement. The SRS document includes computer terms, software terms, and technical terms… Written style most likely for officer of faculty or department, administrator of this system.

Typographical Convention

|  |  |
| --- | --- |
| Typographic | Reading/Understanding Convention |
| SRM system | This term stands for Student Resource Management system |
| Highlighting words/sentences | Main/key ideas of whole paragraph or a section |
| Bold/Italic/Underline words | Information/Data must be paid attention on |
| Table Color | Distinguish different objects/ideas |
| <> | Reference |

## Intended Audience and Reading Suggestions

|  |  |
| --- | --- |
| Intended Audience | Reading Suggestions |
| Project Manager | Section 3 – System Features: Describe functions in details and constrains to make the Project Manager has an overview. So he can have the estimates for the project. |
| Software Architecture and Designer | Appendix 2: This section describes Usecase diagram and Usecase descriptions. It makes easily to design and develop the proposed system. |
| Tester | The Overview section and Usecase: they will help to make the test plan and write the acceptance test |

## Project Background and Scope

## Background

Trường ĐHDL Văn Lang đang gặp vấn đề cấp bách trong việc quản lý hồ sơ sinh viên vì số lượng ngày càng tăng cao. Trường thành lập được 15 năm, có tới 15 Khoa/ Ban đào tạo và 2 cơ sở giảng dạy. Tổng số sinh viên khoảng 12000 và mỗi năm trường nhận khoảng 3000 sinh viên.

Khó khăn:

* Cứ tới đầu năm học, trường phải mướn rất nhiều nhân viên bên ngoài để nhập liệu hồ sơ đến mấy ngày mới xong.
* Các khoa không thể báo cáo số lượng hồ sơ nhận trong ngày, phải để xong hết mới có thể thống kê báo cáo, Thông tin sẽ không còn giá trị, mang tính thời sự
* Khó tổng hợp thống kê. Các thao tác làm thủ công rất khó khăn mất thời gian và tốn thời gian
* Quy trình sử dụng các công cụ như hồ sơ giấy , dữ liệu Excel, Word để quản lý hồ sơ của tất cả sinh viên sẽ gây khó khăn cho việc quản lý tìm kiếm sau này

## Scope

Hằng năm sinh viên đến làm thủ tục nhập học, đem giấy báo trúng tuyển tới, hồ sơ tới trường. Sinh viên xuống phòng kế toàn đóng tiền trước (ở thư viện) rồi qua kế bên chụp hình và đem tất cả lên trên khoa làm thủ tập nhập học.

Hệ thống không quản lý giai đoạn đóng tiền, chụp hình, chỉ quản lý việc nộp hồ sơ trên khoa.

Khách hàng mong muốn:

* Thông tin báo cáo về số lượng nhận hồ sơ theo ngày để phòng nhân lực hay Ban giám hiệu có thể cập nhật thông tin kịp thời. Thông tin chính xác
* Hồ sơ nhập này sẽ được mã hóa chuyển sang phần mềm quản lý thông tin sinh viên, không cần phải nhập lại nữa.
* Về sau việc tìm kiếm thông tin nhanh hơn không cần mất thời gian tìm kiếm
* Thống kê theo dạng chọn một ngày, chọn hồ sơ theo khoa hay chọn theo tổng số sinh viên đậu vào trường

Software product SRM is developed to solve problems in current processes, as well as help users manage the profile of student at the university more effectively.

## References

|  |  |
| --- | --- |
| Reference | Source |
| Software requirements specification template | by Karl E. Wiegers, Process Impact www.processimpact.com |
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# Overall Description

## Product Perspective

## Physics

***Explain model***

* Physics model between campus 1 and 2 is connected by fiber cable
* Main server is located at campus 1 and campus 2 locates the other server.

## Static Perspective

## Dynamic Perspective

Reference **Dynamic Perspective** appendix was attached.

## Product Features

****

|  |  |  |
| --- | --- | --- |
| Product features | System Features | Functions |
| Easy to use | Change language with purpose |  |
| Program run fast and lightly |  |
| Easier to search |  |
| Used languages are easy to understand |  |
| Auto refresh |  |
| SRM system | General | Login |
| Logout |
| Change Password |
| **Student Record Management** | **Import Student Record** |
| **Search/ View List Student Records** |
| **View Detail a Student Record** |
| **Update Student Record** |
| **Print Invoice** |
| **User Management** | **Add new User** |
| **Search/ View List User** |
| **View Detail User Information** |
| **Update User Information** |
| **Assign Authorize** |
|  | **Reset Password** |
| **Enable/ Disable User** |
| **Report & Statistics** | **Export Report: Number of Received Student Records on a day** |

* 1. **User classes and characteristics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| User Group | Description | Module of use and function of use | **Experience level** | Frequency of use |
| ***The training department officers*** | They use this system to modify and manage grades, search, report, statistics and print desired contents | **General Module:**   * Search information under the selective criteria * Modify information ( on study result field) * Display information * Print data   **Reports and statistics Module:**   * Create statistics about period report * Create statistics about specification report   Student Information Management Module:   * Import a student records data * List of special student and tuition exemptions * Record of graduated student | Have at least 1 course in using **SRM system** | 30%/day |
| ***The human resource department officers*** | They use this software to manage student information, modify, search, report, statistics and print desired contents | **General Module:**   * Search information under the selective criteria * Modify information ( on student information field) * Display information * Print data   **Reports and statistics Module:**   * Create statistics about period report * Create statistics about specification report   **Study Result Management Module:**   * Import a student records data. * Create list of student pass criteria of scholarship * Study result summary of student | Have at least 1 course in using **SRM system** | 30% / day |
| ***Falcuty/ Devision*** | They use this software to modify, keep tracking of student information, search, report, statistics and print desired contents | **General Module:**   * Search information under the selective criteria * Modify information ( on specified field that assigned for that user) * Display information * Print data   **Reports and statistics Module:**   * Create statistics about period report * Create statistics about specification report | Have at least 1 course in using **SRM system** | 30 % / day |
| ***Administrator*** | They use SRM product to manage this system, handle management issues of this system.  Nghe  Đọc ngữ âm | **System Management Module**:   * Create user accounts * Change password * Classify user * Look up the user log * Backup and restore data * Remove user’s account * Manage user’s information | Have at least 2 weeks training to be able to manage this system | 35% / day |
| ***School authority*** | Management department have the right to inspect and monitor the operation of the system through the entry statistics and reports. | * General Module * Reports and statistics Module | Have at least 1 course in using **SRM system** | 5% / day |

* 1. **Operating Environment**

SRM product is built as Window Forms Application, developed on the Java programming language; it has capable of running on most bases, operating systems through the Java Virtual Machine (Java environment).  
The system shall manage information of all students in two campuses through a database that is located at campus 1. Those computers, that have installed the software, shall operate on the common database through Local LAN.

System operates in a LAN environment (intranet). It supports two languages: English and Vietnamese.

Nowadays, department, faculties and library at Van Lang University usually have specialized software to support the work of each department and SRM product shall import data from those software to use in system.

***A* local *area* network *(LAN)***

* **Server:**• Windows server -2003 or Windows server -2008 operating system.  
  • CPU Core 2 dual or xeon 4 core.  
  • Memory RAM 1 GB  
  • Hardware is at least 80GB  
  • Database MSSQL Server 2000 or 2005
* **Client:**• Windows-XP or Windows 7 operating system  
  • CPU Pentium III, 1.8 GHz or core 2 dual.  
  • Memory RAM 512 MB  
  • Hardware is at least 40GB
  1. **Design and implement constraints**

|  |  |  |
| --- | --- | --- |
| **ID** | **Name** | **Description-limit** |
| 1 | **Language** | -English(Us) (optional)  -Vietnamese (default) |
| 2 | **Technical** | Java, Md5 |
| 3 | **Design interface** | Design interface for this software must base on interface in this documentation |
| 4 | **Implementation Time** | This system shall be deployed in the next semester of school year. |

* 1. **User Documentation**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Support as** | **Description** | **Format standard** |
| 1 | Online Help | Online support common question are available in the library.http://PoDCo.com/support  To support some question patterns or make another questions | Running in web browser <IE, Firefox> |
| 2 | Catalog Guide | The catalog is described in detail how to use  Describe the basic features  Artwork clearly and fully | It is formatted as Window Form and it is integrated in Help menu of the SRM product |
| 3 | User Manual | A detailed document guides how to use this software Each feature is introduced explicitly | Paper size A4  Good quality paper Approximately 100 pages |
| 4 | Learning by video | Images in the DVD will guide details step by step using each features  From the basic features to the complex features  Images are clear from DVD, easy to use for use.  There are several short time film for user to relax between the time 45 minutes | DVD |

1. **System Features**

**3.1 Search information under selective criteria**

**3.1.1 Description and Priority**

This feature shall help you find all information students under selective criteria

***Priority:*** medium.

**3.1.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

* Input keyword in text field and select criteria
* Click button “tìm kiếm”
* System shall show all search result or announce the information cannot be found.
* User shall use function sort search result to show a clearly result.

**3.1.3 Functional Requirements**

***SI-1:*** Input keyword and select keyword field.

Input: Keyword and selected field

Output: Keyword and field.

System use keyword and field for function Search.

***SI-2:*** Select criteria.

Input: Criteria: “Khoa”, “Từ năm”, “Đến năm”.

Output: Parameter of criteria.

System use criteria were selected to search more accuracy.

***SI-3:*** Search.

Input: Keyword and field, parameter of criteria.

Output: Information.

System shall use keyword and selected criteria to find and show all relevant information, if system shall find any information, it shall show announcement

***SI-4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

**3.2 Modify information**

**3.2.1 Description and Priority**

This feature shall help you modify student information

***Priority***: high.

**3.2.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

* Select information that shall be modified (blue and underline phrase)
* System shall display information that user shall change
* User modifies information
* System shall save new information into database.
* System creates log about who modified and what information is saved into database

**3.2.3 Functional Requirements**

***MI-1:*** Field of modified information

Input: Selected information shall be modify

Output: field of information to modify

System shall display a GUI to allow user shall modify properties of selected information

***MI-2:*** Modify information

Input: Information was modified

Output: New information are saved in database

System shall save modified information in database

***MI-3:*** Create log

Input: Information about time, and object was modify, who modify

Output: Log is saved into database

System shall create log about who modify, what information that saved into database in specified time.

**3.3 Display information**

**3.3.1 Description and Priority**

This feature shall display information on the interface

***Priority:*** high.

**3.3.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) User:***

* Select information need to view.
* System shall show information in to interface

**3.3.3 Functional Requirements**

***DI-1:*** Display information

Input: Selected information to display

Output: Display information or data in to interface

System shall display data or information in interface.

**3.4 Print data**

**3.4.1 Description and Priority**

This feature shall help you print information.

***Priority:*** medium.

**3.4.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) User:***

* Select information shall be printed
* Select function print information
* System shall connect to hardware and print out information.

**3.4.3 Functional Requirements**

***PD-1:*** Print information

Input: Information shall be printed

Output: Send information to hardware

System shall connect to the printer and send all information needs to print to printer.

**3.5 Create new account**

**3.5.1 Description and Priority**

This feature shall help administrator create new account

***Priority:*** high.

**3.5.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) Admin:***

Select function create new account

Fill information about user (just user names and password is required)

Click button “đồng ý”

System saves new account and its information in database.

**3.5.3 Functional Requirements**

***CA-1:*** Create new account

Input: Account‘s information, username and password, account admin

Output: New account was created and saves in database

System shall display a GUI allow user shall modify properties of selected information

**3.6 Change password**

**3.6.1 Description and Priority**

This feature shall help user change password

***Priority:*** high.

**3.6.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) User:***

* Select function Change password
* Fill old password, new password and confirm
* System shall verify security level of password
* User selects “đồng ý”
* System change password and save it in database.

**3.6.3 Functional Requirements**

***CP-1:*** Change password

Input: Old password, new password and confirm

Output: Password was change and save in database

System shall check and change password of user and save in database, if password wasn’t valid system shall warn user and allow user re-fill.

***CP-2:*** Verify security level of password

Input: New password

Output: security level of password

System shall show security level of new password to interface to help user determine the best security password

**3.7 Classify user**

**3.7.1 Description and Priority**

This feature shall help administrator determine class of user

***Priority:*** high.

**3.7.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) Admin:***

Select function Classify user

Choose account and select class of user

System shall save information in database

**3.7.3 Functional Requirements**

***CU-1:*** Classify user

Input: Username, class of user, account admin

Output: Account was classified and saves in database

System shall save information about class of account in database

**3.8 Look up the user log**

**3.8.1 Description and Priority**

This feature shall help administrator and user see action of user

***Priority:*** high.

**3.8.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) User:***

Select function look up the user log

System shall show criteria of log for user selection like: date, time

System shall show only log of account user was sign in

***2) Admin:***

Select function look up the user log

System shall show criteria of log for admin selection like: date, time, user’s account

System shall show one or all user log base on criteria\

**3.8.3 Functional Requirements**

***LU-1:*** Look up user log

Input: Log data, criteria was selected

Output: User’s log shall show in interface base on criteria

System shall show user’s log base on selective criteria

***LU-2:*** Choose criteria

Input: User account or admin account, criteria

Output: Criteria was selected

System shall show criteria base on account and save selected criteria for function

Look up user log

**3.9 Backup and restore data**

**3.9.1 Description and Priority**

This feature shall help administrator backup or restore data

***Priority:*** high.

**3.9.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) Admin:***

Select function Backup and restore data

Select Backup or restore

If admin select backup, system shall show a interface allow admin add name and description of backup and backup all data in to backup storage

If admin select restore, system shall show a interface allow admin choose the restore point and restore data from backup storage

**3.9.3 Functional Requirements**

***BR-1:*** Backup and restore data

Input: Account admin

Output: Selection about backup or restore

System shall show interface backup or restore base on selection of admin

***BR-2:*** Backup

Input: Data on running server and database, name of backup point and description

Output: Data was save in backup storage, create restore point

System shall save all data of database in to backup storage and create restore point base on backup time, backup name and backup description.

***BR-3:*** Restore

Input: Data in backup storage and selected restore point

Output: Data was restore to database

System shall restore all data from backup storage to database base on restore point

**3.10 Remove user account**

**3.10.1 Description and Priority**

This feature shall help administrator remove user account

***Priority:*** high.

**3.10.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) Admin:***

Select function Remove user account

Fill name of account

Before admin click “đồng ý” system shall confirm the last time and remove account permanently

**3.10.3 Functional Requirements**

***RU-1:*** Remove user account

Input: Account admin, account name

Output: Selected account was removed

System shall base on name of account to removed it from database

**3.11 Manage user’s information**

**3.11.1 Description and Priority**

This feature shall help administrator manage and modify user’s information

***Priority:*** high.

**3.11.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) Admin:***

Select function Manage user’s information

System shall show interface with all user’s account and it information, system allow admin to modify information of user

**3.11.3 Functional Requirements**

***MU-1:*** Manage user’s information

Input: Account admin, user data

Output: All account and information of it

System shall show interface with all users’ account and it information; admin shall modify and manage user data on it.

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**3.1 2 Record of Graduated Student**

**3.12.1 Description and Priority**

This feature allows administrator to manage Graduated Student information

***Priority:*** High.

**3.12.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of graduated student according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information of that student.

**3.12.3 Functional Requirements**

***RE-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***RE -2:*** View detail information of student.

Input: Name of student

Output: Detail information of student

The system shall load information of student according to needs of user.   
***RE -3:*** Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information has been edited of that student.

System shall save information that edited into database.

***RE -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

**3.13 Import Information of Student**

**3.13.1 Description and Priority**

This feature allows you to access student records data to database of system.

***Priority:*** High

**3.2.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

1. ***User:***

Select Import function

Select link

Select file and format file need be imported into database

Select “Đồng ý” button.

**3.13.3 Functional Requirements**

***IPS-1:*** Select file and format file need be imported into database

Input: Information of student file.

Output: Information of student file is selected.

The system use file and format of file to import into database

**3.14 List of exempted fees student**

**3.14.1 Description and Priority**

This feature allows you to manage a list of exempted fees students

Priority: High

**3.14.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users are:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of exempted fees students according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information about exempted fees of that student.

**3.14.3 Functional Requirements**

***SP-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***SP -2:*** View detail information of student.

Input: Name of student on list table

Output: Detail information of student

The system shall load information of student according to needs of user.

***SP -3:*** Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information has been edited of that student.

System shall save information that edited into database.

***SP -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

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**3.15 Import List about score of student**

**3.15.1 Description and Priority**

This feature allows you to access a student records data into database of system

***Priority:*** High

**3.15.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

1. ***User:***

Select Import function

Select link

Select file and format file need be imported into database

Select “Đồng ý” button.

**3.15.3 Functional Requirements**

***IPR-1*** Select file and format file need be imported into database

Input: List about score – board of student file.

Output: List about score – board of student file is selected.

The system use file and format of file to import into database

**3.16 Study result**

**3.16.1 Description and Priority**

This feature allows you to manage information about score of student.

***Priority:*** High.

**3.16.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of student according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information about score-board of that student (at high shool and university).

**3.16.3 Functional Requirements**

***RS-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***RS-2:*** View information about score – board of student.

Input: Name of student on list table

Output: Detail information about score – board of student.

The system shall load information about score – board of student according to needs of user.

***RS-3***: Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information about score – board has been edited of that student.

The system shall save information that edited, into database

***RS-4***: Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

**3.17 List of student receiving scholarship**

**3.17.1 Description and Priority**

This feature allows you to manage a list of student receiving scholarship

***Priority:*** High.

**3.17.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of student according to what criterion user select.

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information of that student.

**3.17.3 Functional Requirements**

***SS-1*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***SS -2:*** View detail information of student.

Input: Double – click on name of student on list table.

Output: Display detail information of student

The system shall load information of student according to needs of user.

***SS -3***: Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information has been edited of that student.

System shall save information that edited into database.

***SS -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

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**3.18 Import Information about Tuition – Scholarship of Student**

**3.18.1 Description and Priority**

This feature allows you to access Information about Tuition – Scholarship of Student data into database.

***Priority:*** High

**3.18.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

1. ***User:***

Select Import function

Select link

Select file and format file need be imported into database

Select “Đồng ý” button.

**3.18.3 Functional Requirements**

***IPT-1*** Select file and format file need be imported into database

Input: List of tuition information file

Output: List of tuition information file is selected.

The system use file and format of file to import into database

**3.19 Information about Tuition of Student**

**3.19.1 Description and Priority**

This feature shall help you to find all information account tuition status of student according to what criterion user select.

***Priority:*** High.

**3.19.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of student according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information about tuition of that student.

**3.19.3 Functional Requirements**

***ST-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***ST -2:*** View detail information of student.

Input: Double – click on name of student on list table.

Output: Display detail information of student

The system shall load information of student according to needs of user.

***ST -3:*** Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information about tuition has been edited of that student.

System shall save information that edited into database.

***ST -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

**3.20 List of student receiving scholarship**

**3.20.1 Description and Priority**

This feature shall help you to manage all information of student that received scholarship

***Priority***: High.

**3.20.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of graduated student according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display detail information about scholarship of that student.

**3.20.3 Functional Requirements**

***LS-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***LS -2:*** View information of student receiving scholarship.

Input: Name of student on list table.

Output: Information about scholarship of student.

The system shall load information of student receiving scholarship according to needs of user.

***LS -3:*** Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information about scholarship has been edited of that student.

System shall save information that edited into database.

***LS -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

**3.21 List of exempt fees student**

**3.21.1 Description and Priority**

This feature shall help you to manage all information of exempt fees student.

***Priority:*** High.

**3.21.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select default information in each combo box

Click “Tìm kiếm” button.

The system shall display a list of graduated student according to what criterion user select

User shall use sort function to show result clearly.

Double-click on name of any student on list table.

The system shall display information about the remission of tuition of that student.

**3.21.3 Functional Requirements**

***FT-1:*** Select default information in each combo box

Input: Information is selected: “Faculty”, “Class” in combo box

Output: List of student according to information that user selected.

The system shall use the selected information to load data from database.

***FT -2:*** View detail information of student.

Input: Name of student on list table

Output: Detail information about exempt fees of student

The system shall load information of student according to needs of user.

***FT -3:*** Edit detail information of student

Input: Information need be edit of each student by user that is permission.

Output: Detail information about exempt fees has been edited of that student.

System shall save information that edited into database.

***FT -4:*** Sort search result.

Input: Information was showed, sort criteria.

Output: Information was sorted.

System shall use selected sort criteria to sort and display information, if user don’t use sort function, system shall user sort criteria default is “Tên” and sort from A to Z.

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**3.22 Create statistics about period report**

**3.22.1 Description and Priority**

This feature shall help you create form reports that saved into database.

***Priority:*** high

**3.22.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select information from combo box

Click button “Hoàn tất”

System shall show periodically report form that you selected.

Click button “Tìm kiếm”

**3.22.3 Functional Requirements**

***SRP-1***: Select information from combo box

Input: Selected information from combo box; Criteria: “Khoa”, “Học kì”, “Năm học”, “Mục báo cáo”, “Mẫu báo cáo”.

Output: Parameter of criteria.

System use selected information for function RF-2

***SRP -2:*** Create periodically report form

Input: Criteria: “Khoa”, “Học kì”, “Năm học”, “Mục báo cáo”, “Mẫu báo cáo”.

Output: Periodically report form

System use parameter of criteria to load data from database and fill the report form.

***SRP -3:*** Periodically report form is saved into database

Input: Click button “Hoàn tất”

Output: Periodically report form is saved into database

System must be saved this report into database

**3.23 Create statistics about specification report**

**3.23.1 Description and Priority**

This feature shall help you create reports with specified field that you want.

***Priority:*** medium.

**3.23.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select specified fields from combo box

Click button “Thêm” to add that field into your report

Click button “Đồng ý”

System shall show report form that you selected.

Click button “Hoàn tất”

**3.23.3 Functional Requirements**

***SRS-1:*** Add Specified field

Input: Select specified fields from combo box; Example : “Khoa”, “Học kì”, “Năm học”, “Môn học”,..

Output: Selected fields that be displayed into “Các mục được chọn”

System use selected fields for function SRS-2

***SRS -2:*** Create statistics about specification report

Input: Selected fields

Output: Specified report form

System use parameter of select fields to load data from database and fill the report form.

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**3.24 Log in**

**3.24.1 Description and Priority**

This feature shall help user log in to the system and use the others features.

***Priority:*** high

**3.24.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Input username and password

Click button “Đồng ý”

System shall verify username, password and allow the user login to system.

Click button “Hủy”

System shall be back into the original interface

**3.24.3 Functional Requirements**

***LI-1:*** Input username and password

Input: Username and password

Output: The right to login system.

System shall verify username, password and allow the user login to system

**3.25 Log out**

**3.25.1 Description and Priority**

This feature shall help user log out system.

***Priority:*** high

**3.25.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select function log out

System shall confirm the last time before terminate system

**3.25.3 Functional Requirements**

***LO-1:*** Log out

Input: User account

Output: System termination.

System shall terminate.

**3.26 Change language with purpose**

**3.26.1 Description and Priority**

This feature shall help user change language between English or Vietnamese.

***Priority:*** medium

**3.26.2 Stimulus/Response Sequences**

The response/stimulus for the different classes of users is:

***1) User:***

Select the language that use wants in combo box (English or Vietnamese)

System shall load the interface follow the selected language

**3.26.3 Functional Requirements**

***CL-1***: Select the language in combo box

Input: the selected language in combo box

Output: The interface displays follow the selected language.

System shall use the selected information in combo box to load the interface follow the language that user wants.

1. **External Interface Requirements**

Reference **External Interface Requirements** appendix was attached

1. **Other Non- Functional Requirements**

|  |  |
| --- | --- |
| **ID** | **Quality Attribute Description** |
| QA01 | **Quality attribute:** Performance  **Requirement:** Users should be provided with responsive systems from all user requests. |
| QA03 | **Quality attribute:** Availability  **Requirement:** System should provide availability with very small downtime periods. |
| QA04 | **Quality attribute:** Security  **Requirement:** System should protect against unauthorized. |
| QA05 | **Quality attribute:** Robustness  **Requirement:** System should provide the mechanism that allowsthe large number of serviced users at the same time. |
| QA07 | **Quality attribute:** Usability  **Requirement:** The website interface easy to using the online software function. |

* 1. **Performance Requirements**

|  |  |
| --- | --- |
| **PERFORMANCE** | **DESCRIPTION** |
| **PE-01** | SRM system shall carry 100 users to access to system at the same time |
| **PE-02** | SRM system shall take about 3minutes for uploading the import file (1000 students) since user submit it to the repository |
| **PE-03** | SRM system shall take 5s for loading all information of student for requesting by user to view |

* 1. **Security Requirements**

|  |  |
| --- | --- |
| **SECURITY** | **DESCRIPTION** |
| **SE-01** | SRM system shall lock account after password is entered incorrectly 3 times |
| **SE-02** | User shall be limited authority after logging in |

## -- The End --