



**MILITARY TECHNICAL ACADEMY  
FACULTY OF INFORMATION TECHNOLOGY**

**DORMITORY MANAGEMENT SOFTWARE  
DESIGN DESCRIPTION**

**Name: Nguyen Thi Trinh  
Class : ATBMTT-K50**

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## **I. Introduction**

### **1. Purpose**

This is a detailed description of the dormitory management software design, which is the basis for programming functions as well as scripting testing and program testing.

### **2. Scope**

Documentation is the result of the software design process, the communication basis of the developer, which is the basis for testing, commissioning, maintenance, and providing student point-of-care functions.

### **3. Glossary**

<b>Term</b>	<b>Definition</b>
IT	Information Technology
DMS	Dormitory Management Software
User	Staff and student
Database	The existing membership database
UI	User Interface

### **4. References**

<b>STT</b>	<b>Document Name</b>	<b>File name</b>
1	Software Design Document	Software Design Document.doc

### **5. Overview of Document**

The structure of the document consists of 5 parts:

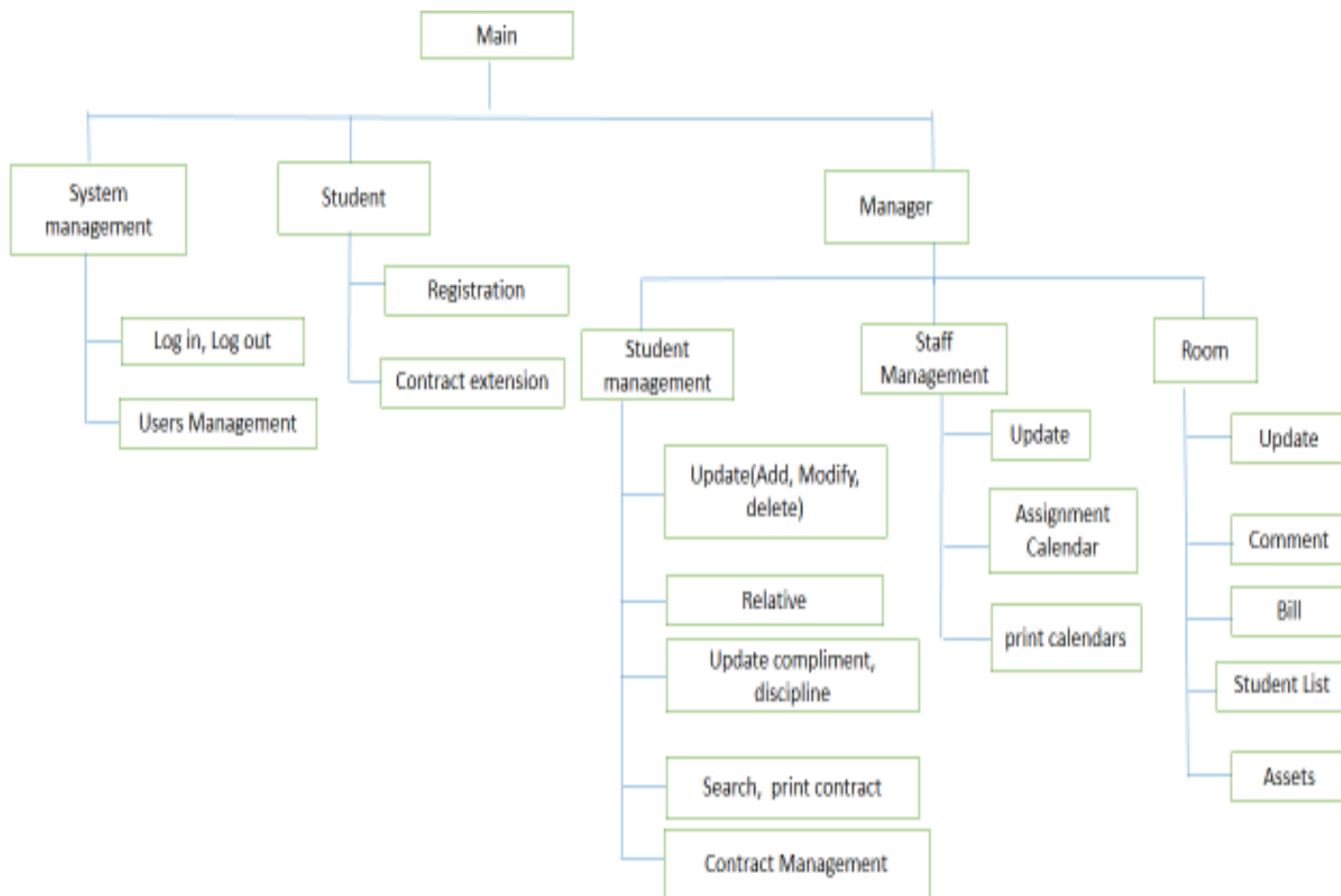
- Section 1 - Introduction: The Basics of Resource Management, Helping People Imagine Content, Benefits and to share documents.
- Section 2: Architectural Design: Constructing Structural Models and Structural Mechanics Models.
- Section 3: Database Design: Design database of system.
- Section 4: Design components: Design subsystems of the system..

- Section 5: User interface: An overview of the interface, the image, and the accompanying activity.

## II. Architectural Design

The software going to be structured consists of 3 parts: Student Management, Staff Management and Dormitory Management. Dormitory Management software must meet the general requirements as follows:

- Administering users by access.
- Process catalog updating, updating data, updating user information.
- **Functional Decomposition**
- Possible module decomposition



### **III. Database Design**

#### **1. Relational Database Design**

##### **- Entities**

Based on the specific activities of the dormitory management system and based on the above functional decomposition model, we identify the entities:

- + Student
- + Staff
- + Dormitory
- + Room
- + Type Room
- + Contract
- + Registration
- + Class
- + Faculty
- + Calendar
- + Assessment Room
- + School Year
- + Relative
- + Bill
- + Compliment
- + Discipline

##### **- Relationship between entities**

- + Each dormitory has several rooms.
- + Each room is a room type
- + Each student belongs to 1 class, each class has many students
- + Each class has 1 class, 1 class has many classes
- + Each student has a dormitory hiring contract established by a manager.
- + There is a daily calendar.
- + Each month, each room has a billing statement created by a manager
- + Each room has an annual review

#### **2. Database Design**

##### **- Specification tables**

- + Student

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of Student
2	Name	Nvarvhar(50)		student name
3	Gender	Nvarchar(3)		Gender of student
4	Object	Nvarchar(20)		Object of student
5	Address	Nvarchar(100)		Address of student
6	PhoneNumber	Char(20)		Telephone number
7	Nation	Nvarchar(30)		Nation of Student
8	Religion	Nvarchar(20)		religion of student
9	DateOfBirth	Date		date of birth of students
10	IdentityCard	Nvarchar(10)		Identity card of student
11	Class_ID	Int	Foreign keys	ID Class of student
12	Room_ID	Int	Foreign keys	ID room of student

### + Staff

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of staff
2	Name	Nvarchar(50)		Name of Staff
3	Address	Nvarchar(100)		Address of staff
4	PhoneNumber	Char(20)		Telephone number of staff
5	Nation	Nvarchar(20)		

6	Religion	Nvarchar(20)		
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### + Room

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of Room
2	NumberStudent	Nvarchar(50)		Number of student in the room
3	MaxNumber	Nvarchar(100)		largest number of students
4	ID_TypeR	Int	Foreign keys	Type Room
5	ID_Dormitori	Int	Foreign keys	Dormitory ID of room

### + Dormitory

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of Dormitory
2	Name	Nvarchar(50)		Name of dormitory
3	NumberRoom	Nvarchar(10)		

### + Relative

Number	Attribute	Data type	constraint	Note
1	Name	Int	Primary Key	Relatives of the students
2	ID_Student	Nvarchar(50)	Primary key	Student ID



4	Relationship	Nvarchar(50)		Relationship with students
5	Job	Nvarchar(10)		Work of relatives

### + Type Room

Number	Attribute	Data type	constraint	Note
1	ID	int	Primary Key	ID of type room
2	Name	Nvarchar(50)		Type of room

### + RoomAssessment

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of Assessment
2	Purport	Nvarchar(50)		Purport of assessment
3	ID_Staff	Int	Foreign keys	Staff writes reviews
4	ID_Year	Int	Foreign keys	Assessment of the year
5	ID_Room	Int	Foreign keys	Rooms need assessment

### + Bill

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of bill
2	ElectricBill	Nvarchar(10)		monthly electricity charge
3	WaterBill	Nvarchar(10)		monthly water charge
4	Rent	Nvarchar(10)		money of rent room
5	DateFounded	Date		date founded of bill
6	ID_Room	Int	Foreign keys	ID of room
7	ID_Staff	Int	Foreign keys	Staff set up bill

### **+ Calendar**

Number	Attribute	Data type	constraint	Note
1	Day	Date	Primary Key	Day of calendar
2	ID_Staff	Int	Primary Key	Staff must be on duty
3	Time	Nvarchar(10)		Time

### **+ Contract**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of contract

2	DateStart	Date		Contract start date
3	DateEnd	Date		Contract end date
4	ID_Student	Int	Foreign keys	Contracts of students
5	ID_Room	Int	Foreign keys	Contract of any room
6	ID_Staff	Int	Foreign keys	Staff set up contract

#### **+ Class**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	Id of class
2	Name	Nvarchar(50)		Name of class
3	ID_Faculty	Int	Foreign keys	Class of the Faculty

#### **+ Faculty**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of Faculty
2	Name	Nvarchar(50)		Name of Faculty
3	Address	Nvarchar(100)		Address of faculty

#### **+Registration**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of student
2	Name	Nvarchar(50)		Name of student
3	Address	Nvarchar(50)		Address of student
4	PhoneNumber	Nvarchar(20)		Student's telephone number
5	Nation	Nvarchar(20)		Nation of student
6	Religion	Nvarchar(20)		Religion of student
7	DateOfBirth	Date		Date of birth

#### **+ SchoolYear**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	Id of school year
2	Name	Nvarchar(50)		Name of School year
3	DateStart	Date		
4	DateEnd	Date		

#### **+ Compliment**

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of compliment
2	Reason	Nvarchar(50)		Reward reasons
3	Degree	Date		

4	Date	Date		Date of compliment
5	Node	Nvarchar(100)		
6	ID_Student	int	Foreign keys	Commendation of any student

### + Discipline

Number	Attribute	Data type	constraint	Note
1	ID	Int	Primary Key	ID of discipline
2	Reason	Nvarchar(50)		Reason of discipline
3	Degree	Date		Degree of discipline
4	Date	Date		Date of discipline
5	Level_dis	Nvarchar(20)		degree of discipline
5	Node	Nvarchar(100)		
6	ID_Student	int	Foreign keys	Discipline of any student

### +User

Number	Attribute	Data type	constraint	Note
1	UserName	Nvarchar(20)	Primary Key	



- + Input: user logs in to the system with personal account and password. After successful login, the user selects the registration button.
- + Output: the system will switch to the registration
- Step 2: User enter necessary information: student code, student name, gender ...
- Step 3: Validate information and display results:
  - + Input: Registration information at the residence.
  - + Output: Notice of registration results

## **1.2. Extension Contract**

- General information function
  - Allows the system user to contract
    - + Input: Student renewal information
    - + Data out: Student renewal contract
- Handling:
  - Step 1: Display contract renewal interface:
    - + Input: User log on to the system with personal account and password. After successfully logging in, the user selects the renewal button.
    - + Output: the system will switch to contract extension
  - Step 2: User enter necessary information: Student ID, student name, gender, contract renewal date, ...
  - Step 3: Validate information and display results:
    - + Input: contract renewal information.
    - + Output: Notice of extension of contract.

## **2. Manager**

### **2.1.0. Student Management**

#### **2.1.1. Update information of Student**

- General information function

Allows system users to update student information

+ Input: Student information in the dorm

+ Output: Student information is updated in the database

- Handling:

+ Step 1: Display the student information view:

- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the update button (Add, Edit, Delete).
- Output: The system will move to the update.

+ Step 2: User enter necessary information: Student ID, student name, gender, ethnicity, religion ...

+ Step 3: Validate information and display results:

- Input: Student information is updated.
- Output: Notice of update results

**2.1.2. .Update information of student's relative**

- General information function

Allows the system user to update the student's relatives information in the dormitory

+ Input: Student's relative information in the dorm

+ Output: Student's relative information is updated in the database

- Handling:

+ Step 1: Display the updated student student's interface:



- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the update button (Add, Edit, Delete) the relative.
  - Output: The system will move to the update.
- + Step 2: User enter necessary information: Student ID, relative name, date of birth, relationship.
- + Step 3: Validate information and display results
- Input: The Student's relative information is updated.
  - Output: Notice of update results

### **2.1.3. Update student's compliment**

#### **- General information function**

Allows the system user to register at the residence

- + Input: Reward content of students.
- + Output: Student's awards are updated to the database

#### **- Handling:**

+ Step 1: Display the update interface for students:

- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the update button (Add, Edit, Delete) to reward the student.
- Output: The system will move to the update.

+ Step 2: User enter the necessary information: Student Code, Reward Code, Reason for Reward, Notes ...

+ Step 3: Validate information and display results:

- + Input: Student feedback is updated.

- + Output: Notice of update results..

#### **2.1.4. Update student's discipline**

- General information function

Allows the system user to update the Student Discipline form.

- +Input: Student residence information card information

- + Output: Students' ballot information is updated in the database

- Handling:

- +Step 1: Display the updated Student Discipline Information interface:

- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the Student Discipline button, and then updates the information on the Discipline form.
- Output: The system will move to the update.

- + Step 2: User enter necessary information: Student Code, Disciplinary Reason, Disciplinary Level

- + Step 3: Validate information and display results:

- + Input: Student information is updated.

- + Output: Notice of update results.

#### **2.1.5. Update information of class**

- General information function

Allows system users to update class information.

- + Input: Classroom information for students.

- + Data output: Class information is updated in the database

- Handling:

+ Step 1: Display interface update class information:

- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the button class, then updates the update.
- Output: The system will move to the update.

+ Step 2: User enter the necessary information: Class code, class name.

+ Step 3: Validate information and display results:

+ Input: Student information is updated.

+ Output: Notice of update results

#### **2.1.6. .Update information of Faculty**

- General information function

Allows system users to update department information

+Input: Department information

+ Output: Department information is updated in the database

- Handling:

+ Step 1: Show faculty update information:

- Input: User logs on to the system with personal account and password. After successful login, the user selects the Faculty Button, then proceeds to update the Faculty Information.
- Output: The system will move to the update.

+ Step 2: User enter the necessary information: Department code, department name.

+ Step 3: Validate information and display results:

- Input: updated faculty information.
- Output: Notice of update results

### **2.1.7. Update Contract**

- General information function

Allows the system user to update the contract information

+Input: Student contract information at the dormitory

+Output: Student contract information is updated in the database

- Handling:

+ Step 1: Display the updated student contract interface

- Input: User logs on to the system with personal account and password. After the login is successful, the user selects the contract button, then selects the contract update.
- Output: The system will move to the update.

+ Step 2: User enter necessary information: Student ID, relative name, date of birth, relationship.

+ Step 3: Validate information and display results:

- Input: Student contract information updated.
- Output: Notice of update results.

## **2.2.0 Staff Management**

### **2.2.1. Update information of staff**

- General information function

Allows system users to update employee information

- Input: Information on staff working at the dorm
- Output: information of staff is updated in the database

- Handling:

+Step 1: Display the updated employee information interface

- Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the update button (Add, Edit, Delete) employees.
- Output: The system will move to the update.

+Step 2: User enter the necessary information: Employee code, employee name, address ...

+ Step 3: Validate information and display results:

+Input: Employee information is updated.

+ Output: Notice of update results.

### **2.2.2. Update employee schedules**

- General information function

Allows system users to schedule dormitories for employees

- Input: Schedule information on daily dormitories
- Output: Schedule information is updated in the database

- Handling:

+Step 1: Displays the scheduler interface

- Input: User logs on to the system with personal account and password. After successful login, users select the calendar button, then proceed to update.
- Output: The system will move to the update.

+ Step 2: User enter the necessary information: date, employee code, time

+ Step 3: Validate information and display result

- Input: Employee calendar information updated.
- Output: Notice of update results.

### **2.3.0. Dormitory Management**

#### **2.3.1. Update information of dormitory**

- General information function

Allows the system user to update the dormitory information

- Data entry: dormitory information
- Data out: dormitory information is updated in the database

- Handling:

+Step 1: Display the updated hostel information interface

- Input: User logs on to the system with personal account and password.  
After successful login, the user select the button to update the dormitory information.
- Output: The system will move to the update.

+ Step 2: User enter necessary information: dormitory code, dormitory name.

+ Step 3: Validate information and display results:

Input: updated dormitory information.

Output: Notice of update results.

#### **2.3.2. Update information of room**

- General information function

Allows system users to update room information.

- Input: Accommodation information of the hostels
- Output: Student's room information is updated in the database

- Handling:
  - + Step 1: Display the updated room information interface
    - Input: User logs on to the system with personal account and password. After successfully logging in, the user selects the update button (Add, Edit, Delete) the room.
    - Output: The system will move to the update.
  - + Step 2: User enter the necessary information: Room code, room name, rent, current student number, student number
  - + Step 3: Validate information and display results:
    - Input: Room information is updated.
    - Output: Notice of update results.

### **2.3.3. Set up bill of month**

- General information function

Allows users to bill monthly expenses of rooms

- Input: billing information
- Output: Invoice information is updated in the database

- Handling:
  - + Step 1: Display the bill update interface
    - Input: User logs on to the system with personal account and password. After successful login, the user select the invoice button
    - Output: The system will move to the update.
  - + Step 2: User enter the necessary information: Encode, room code, electricity charge, water bill.
  - + Step 3: Validate information and display results:

Input: Invoice information is updated.

Output: Notice of update results.

## **V. .Design User Interface**

### **1. General description**

Each management interface is organized into two forms: Form list and object details are interested, Form details related objects.

- List form and object details composed of components

- + 1 grid shows the list of updated data objects

- + Add, edit, delete, print

- + 1 frame shows detailed information of the object

- Detailed form of related objects

- + show list of related objects

Possible functions.

- + detail a specific object

### **2. Screen Interface**

The tool uses the interface designer: DevComponents.DotNetBar2.dll, BaseControlLib\_SE.dll.

- Layout list and details:

- Table of functions located at the top of the form, including operations: Add, edit, delete, save, print

- Supports quick search by certain fields.

- Use GridControl to display the data sheet, convenient for manipulation

Sort, filter, search, edit. Display data on the DataGridView.

- The left side of the interface is the details of the object

- The upper right is the object involved

For example:



**DORMITORY MANAGEMENT SOFTWARE**

System Student Manager Help

Student Staff Dormitory

Information

ID of Staff:

Staff name:

Phone Number:

Nation:

Religion:

Date of birth:

Address:

Add
 Edit
 Delete
 Save
 Cancel
 Output File
 Calendar

Enter text to search...

ID	Staff Name	Nation	Religion	Date Of Birth	Address	Phone Number
1	Nguyễn Văn Hoàng	Kinh	Đạo hồi	2/3/1986	Hà Nội	0979869302
2	Nguyễn Hằng Minh	Kinh	Không	2/3/1974	Nam Định	093683298
3	Nguyễn Minh Thái	Tây	Không	3/4/1975	Bắc Ninh	0384478933

**Discipline**

***Discipline Management***

Discipline ID:

Reason:

Student ID:

Degree:

Level of Discipline:

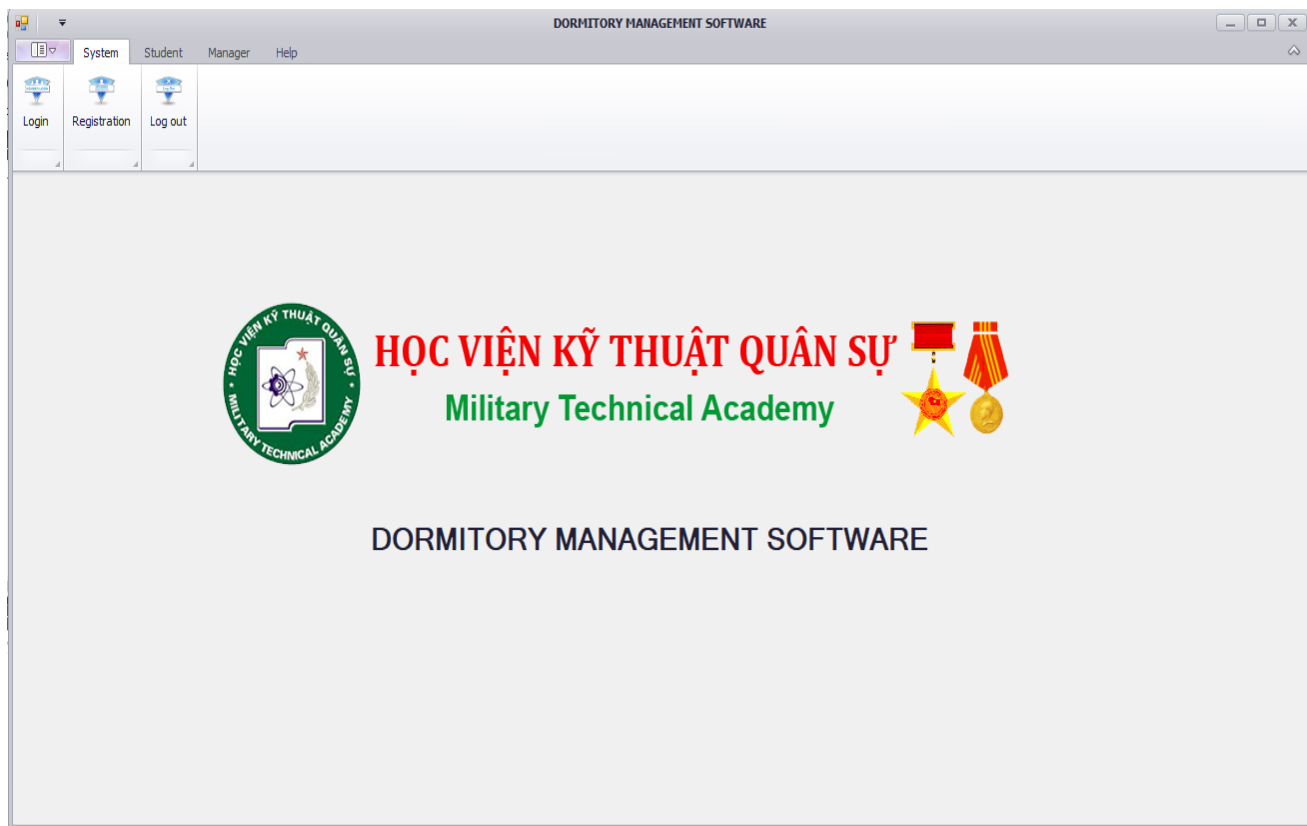
Note:

Add
 Edit
 Delete
 Exit
 In

**Discipline List**

### 3. InterFace

Start



### 3.1. Log In

TT	Component name	Type	Reference	Describe
----	----------------	------	-----------	----------

1	btnLogIn	Button	System.Windows.Forms.Button	Log In to the system: Clicking this button will check the login account
2	btnCancel	Button	System.Windows.Forms.Button	Exit the program
4	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the account name
5	txtPassWord	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the account password

### 3.2. Registration account

The screenshot shows a Windows application window titled "Registration". Inside the window, there is a section titled "Registration Account". This section contains two text input fields: "Username" and "PassWord". Below the text fields, there are three buttons: "Add" (with a plus icon), "Retype" (with a pencil icon), and "Exit".

T T	Compone nt name	Type	Reference	Describe
--------	--------------------	------	-----------	----------

1	btnAdd	Button	System.Windows.Forms.Button	Add Account: When the button is clicked, the account is added
2	btnRetype	Button	System.Windows.Forms.Button	Retype Account: When you click the button, the user enters the account information again
4	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the account name
5	txtPassWord	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the account password

### 3.3.0. Student Interface

#### 3.3.1. Register into the dormitory

**DORMITORY MANAGEMENT SOFTWARE**

System Student Manager Help

My Information Registration Extension contract

**ĐĂNG KÝ LƯU TRÚ KÝ TÚC XÁ HỌC VIỆN KỸ THUẬT QUÂN SỰ**

Information of Student

Student Name  1

Gender  2

Object  3

Address  4

Phone Number  5

Nation  6

Religion  7

Identity card  8

Date of birth  9

Class  10

Information of Relative

Father

Name  11

Date of birth  12

Job  13

Mother

Name  14

Date of birth  15

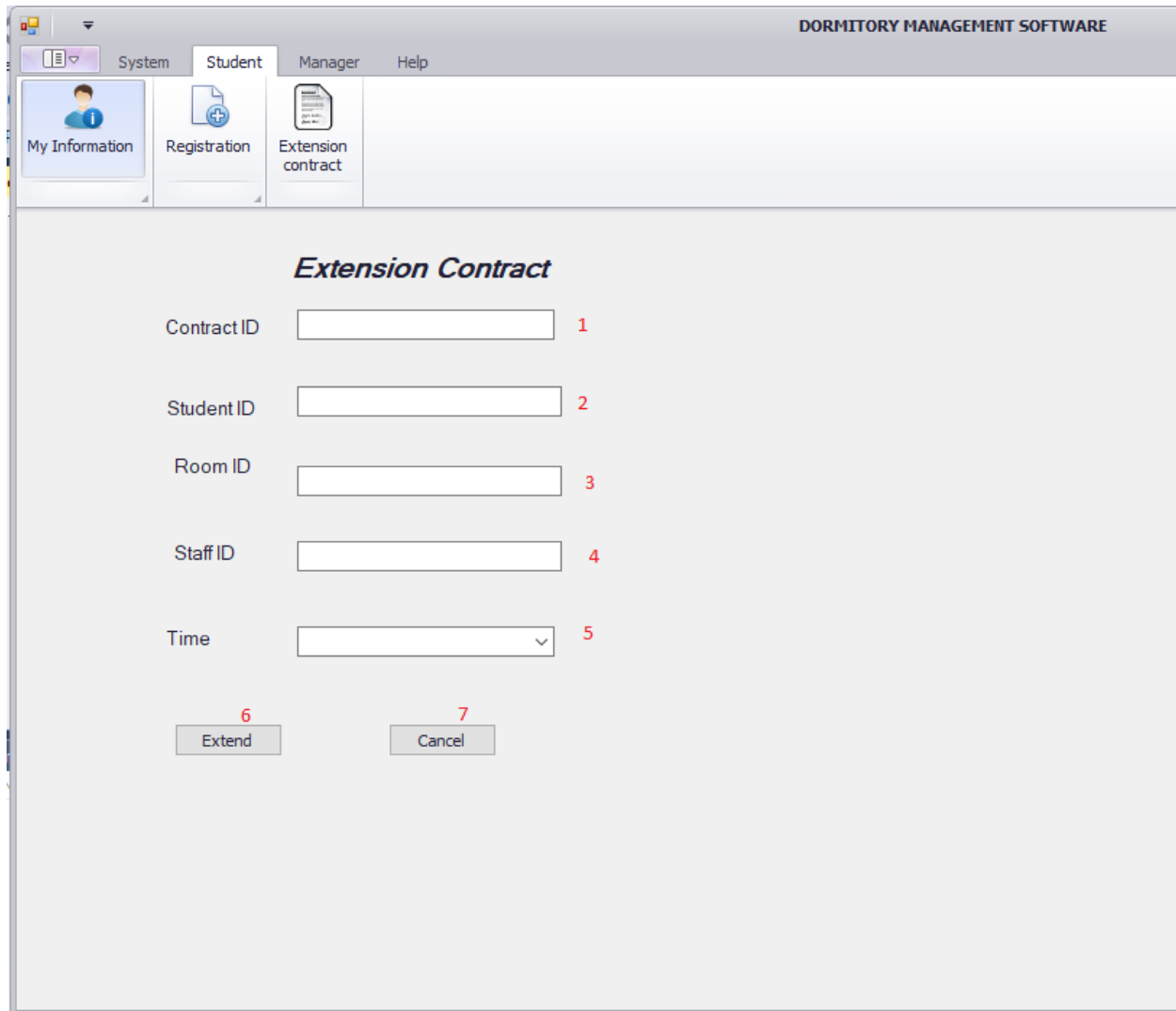
Job  16

17 Register 18 Cancel

TT	Component name	Type	Reference	Describe
1	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Student name
2	cbbGender	ComboBox	System.Windows.Forms.ComboBox	Allows the user to enter the student gender
3	cbbObject	ComboBox	System.Windows.Forms.ComboBox	Allows the user to enter the student Object
4	txtAddress	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Student Address
5	txtPhone	TextBox	System.Windows.Forms.TextBox	Allows the user to enter telephone number of student
6	cbbNation	ComboBox	System.Windows.Forms.ComboBox	Allows the user select Nation of student
7	cbbReligion	ComboBox	System.Windows.Forms.ComboBox	Allows the user select religion of Student
8	txtIdentity	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the identity card of student
9	dateDOB	DateTime	System.Windows.Forms.DateTimePicker	Allows the user to enter the date of birth

10	cbbClass	ComboBox	System.Windows.Forms.ComboBox	Allows the user to enter class name
11	txtNameFather	TextBox	System.Windows.Forms.TextBox	Allows the user to enter Father name of student
12	dateBirthFather	Datetime	System.Windows.Forms.Datetime	Allows the user to enter the date of birth of the student's father
13	txtJobFather	TextBox	System.Windows.Forms.TextBox	Allows the user to enter Job of father
14	txtNameMother	TextBox	System.Windows.Forms.TextBox	Allows the user to enter mother name of student
15	txtBirthMother	Datetime	System.Windows.Forms.Datetime	Allows the user to enter the date of birth of the student's mother
16	txtJobMother	TextBox	System.Windows.Forms.TextBox	Allows the user to enter Job of mother
17	btnRegister	Button	System.Windows.Forms.Button	When clicked on the system button allows registration
18	btnCancel	Button	System.Windows.Forms.Button	Stop to register

### 3.3.2. Extension Contract



**DORMITORY MANAGEMENT SOFTWARE**

System Student Manager Help

My Information Registration Extension contract

***Extension Contract***

Contract ID  1

Student ID  2

Room ID  3

Staff ID  4

Time  5

6 7

Extend Cancel

T T	Component name	Type	Reference	Describe
1	txtID	TextBo x	System.Windows.Forms.Butt on	Allows the user to enter the Contract ID
2	txtStudentID	TextBo x	System.Windows.Forms.Butt on	Allows the user to enter the student ID
3	txtRoomID	TextBo x	System.Windows.Forms.Text Box	Allows the user to enter the Room ID
4	txtStaffID	TextBo x	System.Windows.Forms.Text Box	Allows the user to enter the Staff ID

5	txtTime	TextBo x	System.Windows.Forms.Text Box	Allows the user to enter the Time of contract
6	btnExtension	Button	System.Windows.Forms.Butt on	When clicked on the system button allows extension
7	btnCancel	Button	System.Windows.Forms.Butt on	Stop to extension

### 3.4. Student Management

#### 3.4.1. Main Interface of Student Management

TT	Component name	Type	Reference	Describe
1	barAdd	BarButton	DevComponents.DotNetBar	When you click on the system button will display the list of students registered in



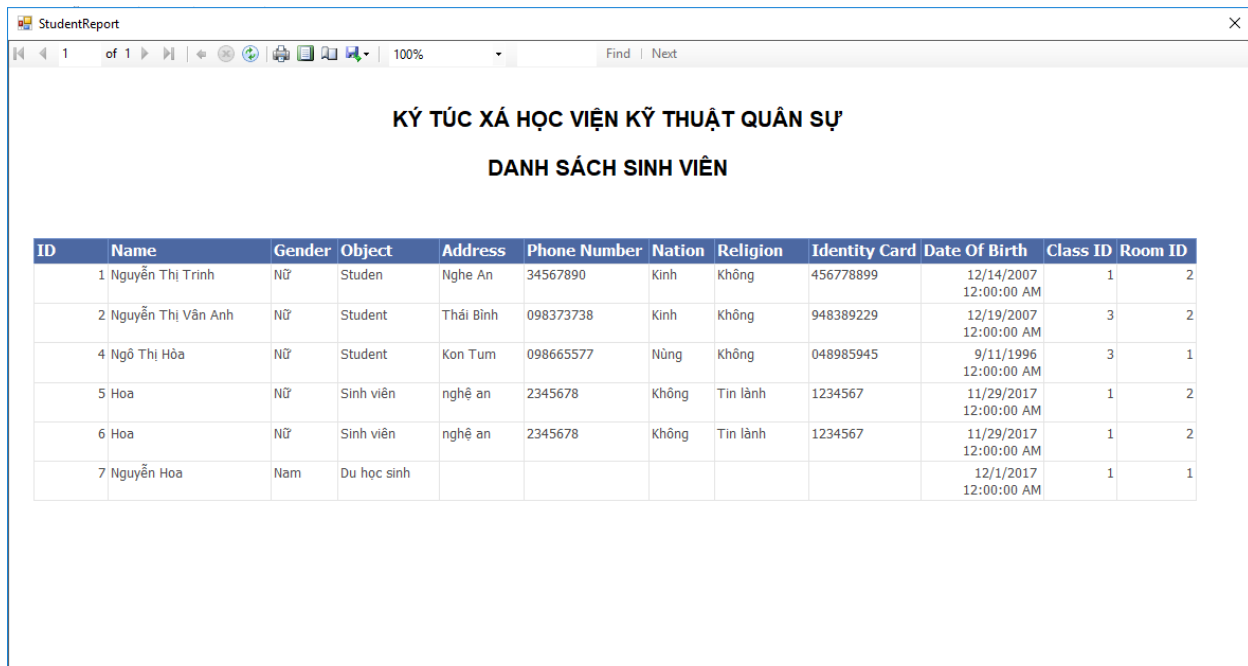
				the dormitory for the user to add options.
2	barEdit	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to edit student information
3	barDelete	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to delete student information
4	barSave	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to save student information
5	barCancel	BarButton	DevComponents.DotNetBar	Clicking on the button allows the user to stop performing actions such as editing or deleting
6	barOutPut	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to export the student list to the file(part 3.4.2)
7	BarRefresh	BarButton	DevComponents.DotNetBar	Clicking on the button will automatically update the new student information
8	barCFM	BarButton	DevComponents.DotNetBar	Click on the system button to display the class and faculty management form (part 3.3.3)
9	barContractM	BarButton	DevComponents.DotNetBar	Click on the system button to display contract form(part

				3.4.4) allowing the user to update the reward information for the selected student
10	txtID	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Student ID
11	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Student name
12	cbbGender	ComboBox	System.Windows.Forms.ComboBox	Allows the user select the student gender
13	cbbObject	ComboBox	System.Windows.Forms.ComboBox	Allows the user select the student Object
14	txtAddress	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Student Address
15	txtPhone	TextBox	System.Windows.Forms.TextBox	Allows the user to enter telephone number of student
16	cbbNation	ComboBox	System.Windows.Forms.ComboBox	Allows the user select student nation
17	cbbReligion	ComboBox	System.Windows.Forms.ComboBox	Allows the user select Student Religion
18	txtIdentity	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the identity card of student
19	dateDOB	DateTime	System.Windows.Forms.DateTimePicker	Allows the user to enter the date of birth
20	cbbClass	ComboBox	System.Windows.Forms.ComboBox	Allows the user select class name
21	cbbRoom	ComboBox	System.Windows.Forms.ComboBox	Allows the user select the Room name

22	btnCompliment	Button	System.Windows.Forms.Button	Click on the system button to display the form compliment allowing the user to update the reward information for the selected student( part 3.4.6)
23	btnDiscipline	Button	System.Windows.Forms.Button	Click on the system button to display the form discipline allowing the user to update the reward information for the selected student(part 3.4.5)
24	btnContract	Button	System.Windows.Forms.Button	then user can print contract(Part 3.4.7)
25	gridStudent	Gridcontrol	DevComponents.DotNetBar	Show student list. When clicked on a line on the gridview will display student information details
26	txtName	TextBox	System.Windows.Forms.TextBox	Displays or allows the user to enter a relative's name
27	txtRelationship	TextBox	System.Windows.Forms.TextBox	Show or allow users to enter relationships with relatives
28	txtJob	TextBox	System.Windows.Forms.TextBox	Show or allow users to enter relatives' job
29	btnAdd	Button	System.Windows.Forms.Button	Clicking on the system button allows users you to enter your relative's information

30	btnEdit	Button	System.Windows.Forms.Button	Clicking on the system button allows user you to edit your relative's information
31	btnDelete	Button	System.Windows.Forms.Button	When clicked on the system button allows the user to delete relatives
32	btnSave	Button	System.Windows.Forms.Button	Clicking on the system button saves changes of information
33	btnCancel	Button	System.Windows.Forms.Button	Stop operation is ongoing
34	dgvRelative	Datagridview	System.Windows.Forms.DataGridView	Show relatives of students

### 3.4.2. Print student list



ID	Name	Gender	Object	Address	Phone Number	Nation	Religion	Identity Card	Date Of Birth	Class ID	Room ID
1	Nguyễn Thị Trinh	Nữ	Student	Nghệ An	34567890	Kinh	Không	456778899	12/14/2007 12:00:00 AM	1	2
2	Nguyễn Thị Vân Anh	Nữ	Student	Thái Bình	098373738	Kinh	Không	948389229	12/19/2007 12:00:00 AM	3	2
4	Ngô Thị Hòa	Nữ	Student	Kon Tum	098665577	Nùng	Không	048985945	9/11/1996 12:00:00 AM	3	1
5	Hoa	Nữ	Sinh viên	nghe an	2345678	Không	Tin lành	1234567	11/29/2017 12:00:00 AM	1	2
6	Hoa	Nữ	Sinh viên	nghe an	2345678	Không	Tin lành	1234567	11/29/2017 12:00:00 AM	1	2
7	Nguyễn Hoa	Nam	Du học sinh						12/1/2017 12:00:00 AM	1	1

### 3.4.3. Class Management and Faculty Management

FormCFM

Faculty Class

+ Add Edit Delete Save Cancel Exit

Information

Faculty ID: 1

Faculty Name: Công nghệ thông tin

Address: Tầng 19 S1

Enter text to search... Find Clear

Drag a column header here to group by that column

IDOf Faculty	Name	Address
1	Công nghệ thông tin	Tầng 19 S1
2	Vô tuyến điện tử	Tầng 5 nhà S1
5	Hóa lý kỹ thuật	Tầng 7 nhà S1
6	Kỹ thuật điều khiển	Tầng 20 S1

### 3.4.4. Contract management

Contract

Information

ID of Contract: 3

Student: Nguyễn Thị Trinh

Room: 2

Staff: Nguyễn Văn Hoàng

Date Start: 08/12/2017

Date End: 08/12/2018

Date Found: 08/01/2017

☒ Expired

+ Add Edit Delete Save Cancel Exit

Enter text to search... Find Clear

IDOf Contract	IDOf Student	Student Name	IDOf Staff	Staff Name	IDOf Room	Date Start	Date End	Date Found	Expired
3	1	Nguyễn Thị ...	1	Nguyễn Văn ...	2	12/8/2017	12/8/2018	1/8/2017	Hết hạn
5	4	Ngô Thị Hòa	2	Nguyễn Hôn...	1	12/13/2017	12/18/2018	1/12/2017	Chưa hết hạn
6	2	Nguyễn Thị ...	3	Nguyễn Min...	2	12/13/2017	12/18/2018	1/12/2017	Chưa hết hạn

### 3.4.5. Discipline of student

Discipline

×

### Discipline Management

Discipline ID

2

Student ID

1

Reason

Gây gỗ với bạn

Degree

Khoa

Level of Discipline

Cảnh cáo

Date

Tuesday , February 2, 2016

Note

Học sinh có hành vi gây gỗ với bạn gây mất trật tự

⋮

+

Add

✎

Edit

✖

Delete

💾

Save

🚫

Cancel

⛔

Exit

	IDOfDiscipline	Reason	Degree	LevelOfDiscipline	DateDiscipline	Note	StudentID
▶	2	Gây gỗ với bạn	Khoa	Cảnh cáo	2/2/2016	Học sinh có hàn...	1

### 3.4.6. Compliment of Student

Compliment

### Compliment Management

Compliment ID

Name

Student ID

Reason

Degree

Date

Note

+ Add
Edit
Delete
Save
Cancel
Exit

IDOf Compliment	Name Of Compli...	Reason	Degree	Date Compliment	Note	Student ID
1.	1 Bằng khen	Có thành tích cao	Học viện	2/18/2016	Giá trị khen thur...	1
	2 Giấy khen	Có thành cao tr...	Khoa	2/18/2016	Giá trị khen thur...	1

### 3.4.7. Printf Contract

Contract\_Report

1 of 1

100%

Find | Next

HỌC VIỆN KỸ THUẬT QUÂN SỰ

Ban quản lý ký túc xá

Cộng hòa xã hội chủ nghĩa Việt Nam

Độc lập – Tự do – Hạnh Phúc

HỢP ĐỒNG THUÊ PHÒNG KÝ TÚC XÁ

Hôm nay, ngày 1/8/2017 12:00:00 AM ,tại Trường Học viện Kỹ thuật Quân sự. Hai bên gồm

**BÊN CHO THUÊ (Bên A): Ban quản lý ký túc xá Học viện Kỹ thuật Quân sự**

Đại diện: Nhân viên: NGUYỄN VĂN HOÀNG

Đơn vị công tác: Phòng Công tác Chính trị HSSV

**BÊN THUÊ CHỖ Ở (Bên B):**

Họ và tên sinh viên : NGUYỄN THỊ TRINH

Nam (Nữ): : nữ

Năm sinh : 12/14/2007 12:00:00 AM

Mã SV : 1

Lớp : công nghệ thông tin 11

Khoa : công nghệ thông tin

Số điện thoại : 34567890

Bên A được sự ủy quyền của Giám đốc Học viện Kỹ thuật Quân sự cùng Bên B, thống nhất ký kết

**Hợp đồng cho thuê phòng ở Ký túc xá Học viện Kỹ thuật Quân sự với các điều khoản sau:**

**Điều 1:**

Bên A đồng ý cho Bên B thuê 01 chỗ ở nội trú tại phòng số : 2 Nhà S13. Ký túc xá Học viện Kỹ thuật Quân sự. Bên B được phép sử dụng các tài sản do nhà trường trang bị tại phòng ở cũng như các phòng sinh hoạt tập thể thuộc khuôn viên Ký túc xá theo Quy chế tổ chức & hoạt động, các quy định và nội quy của Ký túc xá.

**Điều 2: Thời gian cho thuê:** Từ ngày 12/8/2017 12:00:00 AM đến ngày 12/8/2018 12:00:00 AM

**Bên B**

( Ký và ghi rõ họ tên)

**Đại diện bên A**

( Ký và ghi rõ họ tên)

40



## 3.5. Staff Management

### 3.5.1. Main Interface of Staff Management

The screenshot displays the 'DORMITORY MANAGEMENT SOFTWARE' window. The 'Manager' tab is active, showing a sidebar with 'Student', 'Staff', and 'Dormitory' icons. The main area is divided into an 'Information' panel on the left and a data table on the right. The 'Information' panel includes fields for 'ID of Staff', 'Staff name', 'Phone Number', 'Nation', 'Religion', 'Date of birth', and 'Address'. The data table lists staff members with columns for 'ID', 'Staff Name', 'Nation', 'Religion', 'Date Of Birth', 'Address', and 'Phone Number'. Red numbers 1 through 15 are overlaid on the interface to indicate specific components.

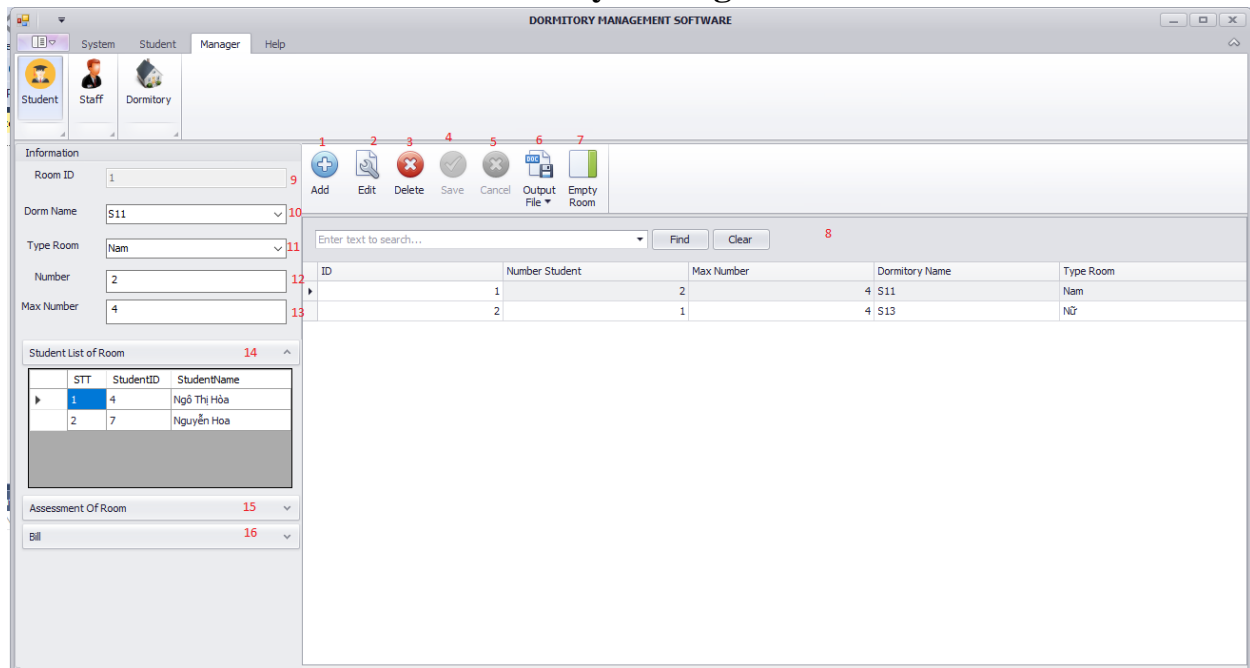
TT	Component name	Type	Reference	Describe
1	barAdd	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to add staff information
2	barEdit	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to edit staff information
3	barDelete	BarButton	DevComponents.DotNetBar	Clicking on the system button allows

				you to delete staff information
4	barSave	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to save staff information
5	barCancel	BarButton	DevComponents.DotNetBar	Clicking on the button allows the user to stop performing actions such as editing or deleting
6	barOutPut	BarButton	DevComponents.DotNetBar	Clicking on the system button allows you to export the staff list to the file(part 3.5.2)
7	BarCalendar	BarButton	DevComponents.DotNetBar	Allows users to add a dormitory calendar
8	gridStaff	GridControl	DevComponents.DotNetBar	Show staff list. When clicked on a line on the gridview will display staff information details
9	txtID	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Staff ID
10	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Staff name
11	txtPhone	TextBox	System.Windows.Forms.TextBox	Allows the user to enter telephone number of staff
12	cbbNation	ComboBox	System.Windows.Forms.ComboBox	Allows the user select staff nation

13	cbbReligion	ComboBox	System.Windows.Forms.ComboBox	Allows the user select Staff Religion
14	dateDOB	DateTime	System.Windows.Forms.DateTimePicker	Allows the user to enter the date of birth
15	txtAddress	Textbox	System.Windows.Forms.TextBox	Allows the user to enter the Student Address

### 3.6. Dormitory Management

#### 3.6.1. Main interface Dormitory Management



TT	Component name	Type	Reference	Describe
1	barAdd	BarButton	DevComponents.Dot NetBar	Clicking on the system button allows you to add room information
2	barEdit	BarButton	DevComponents.Dot NetBar	Clicking on the system button allows

				you to edit room information
3	barDelete	BarButton	DevComponents.Dot NetBar	Clicking on the system button allows you to delete room information
4	barSave	BarButton	DevComponents.Dot NetBar	Clicking on the system button allows you to save room information
5	barCancel	BarButton	DevComponents.Dot NetBar	Clicking on the button allows the user to stop performing actions such as editing or deleting
6	barOutPut	BarButton	DevComponents.Dot NetBar	Clicking on the system button allows you to export the room list to the file
7	barCalendar	BarButton	DevComponents.Dot NetBar	Allows users to add calendars to employees
8	gridRoom	GridControl	DevComponents.Dot NetBar	Show room list. When clicked on a line on the gridview will display room information details
9	txtID	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Room ID
10	txtName	TextBox	System.Windows.Forms.TextBox	Allows the user to enter the Staff name
11	cbbTypeRoom	ComboBox	System.Windows.Forms.ComboBox	Allows the user select Type room

12	txtNumber	TextBox	System.Windows.Forms.TextBox	Number of students are currently in room
13	txtMaxNumber	ComboBox	System.Windows.Forms.TextBox	Number of students to maximum room
14	navStudentOfRoom	navBarGroup	DevComponents.DotNetBar.NetBar	Display the student list in the room
15	navAssessment	navBarGroup	DevComponents.DotNetBar.NetBar	Click on the system button to display Assessment form (part 3.6.3)
16	navBill	navBarGroup	DevComponents.DotNetBar.NetBar	Click on the system button to display Bill form (part 3.6.2)

### 3.6.2. Bill

**Bill Management**

Bill ID  Month  Year

Room ID  Rent

Electric charge  Water charge

Surcharge  Student payment

Staff  Date founded

... Add Edit Delete Save Cancel Exit Print

Enter text to search...

IDOf Bill	Bill Of M...	Year	Water ...	Electric ...	Rent	Surcharge	Student...	Room ID	Staff N...	Date Fo...
▶ 1	1	2000	...	300000	300000	100000	0	Nguyễn...	1 Nguyễn...	3/2/2015

Bill\_Report

1 of 1

100%

Find | Next

HỌC VIỆN KỸ THUẬT QUÂN SỰ

Địa chỉ: 236 Hoàng Quốc Việt

SĐT: 0123.456.789

HÓA ĐƠN THUÊ PHÒNG

Phòng trọ kí túc xá Học viện Kỹ thuật Quân sự

Hóa đơn số: 1

Tên người nộp: NGUYỄN THỊ TRINH

Phòng: 1

Năm: 1 Tháng: 1

Ngày: 3/2/2015 12:00:00 AM

Khoản thu	Thành tiền (VND)
Tiền phòng	100000
Tiền điện	300000
Tiền nước	300000
Phụ phí	0

Tổng: 700000

**Người nộp**

(Kí và ghi rõ họ tên)

NGUYỄN THỊ TRINH

**Người thu**

(Kí và ghi rõ họ tên)

NGUYỄN VĂN HOÀNG

47