LAB221Assignment

Type:	**Long Assignment**
Code:	**J2.L.P0005**
LOC:	**400**
Slot(s):	**N/A**

Title

Family Healthcare Management

Background

N/A

Program Specifications

In this assignment, you are required to build family healthcare management application, in the form of a desktop application. The program has basic functions: add - edit – delete registration information of a family. You are required to use the basic components to design interfaces, use the tabbed pane to organize registration management on the one screen. File is used to store information.

Program organization must clearly separate functions according to MVC model.

USING RMI WRITE INFORMATION TO FILE

Create an application using java swing to create frames like description below

- RegistrationServer.java

```
public interface RegistrationInterface extends Remote{
    boolean createRegistration(RegistrationDTO dto);
    RegistrationDTO findByRegistrationID(String id);
    ArrayList<RegistrationDTO> findAllRegistrations();
    boolean removeRegistration(String id);
    boolean updateRegistration(RegistrationDTO dto);
}
```

- File name: RegistrationData.txt

Registration information of a family is shown following table

Field Name	Type
registrationID	String
fullName	String
age	Integer
gender	Boolean
email	String
phone	String
address	String
numberOfMember	Integer
numberOfChildren	Integer
numberOfAdults	Integer

Features:

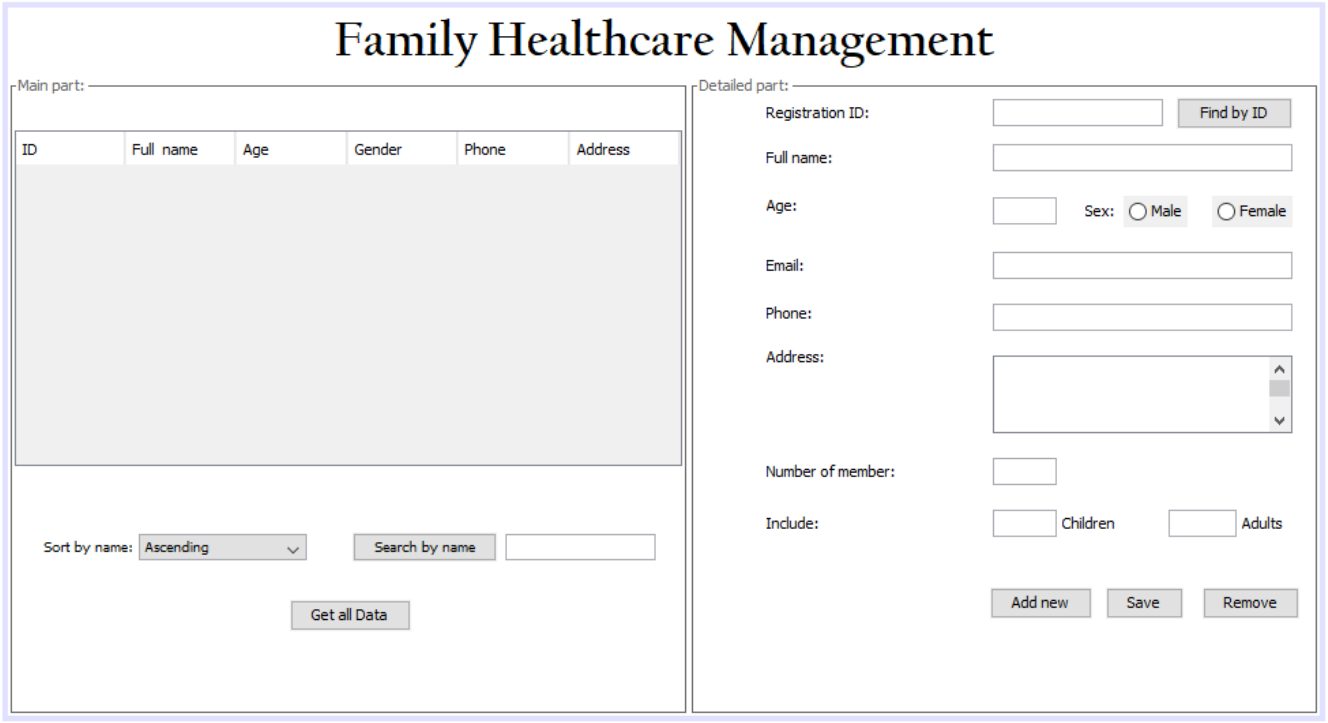
This system contains the following functions:

- **Verify constrain of following data type fields – 50 LOC**
  - RegistrationID: max length is 10, not contains special characters
  - FullName: max length is 50

- Email: max length is 30, contain only one "@" character, do not contain special characters (!, #, $)
- Phone: max length is 15, contain numeric characters only (0-9)
- Number of children: must be >= 0
- Number of adults: must be >=0

- **Function 1: Create new registration – 50 LOC**
  - The user presses the Add new button to clear the information at detailed part, and system preparies for new data entry.
  - The user inputs new registration information. Then user clicks the Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system will insert new registration into the FILE.
  - The registration table must be refreshed after new data has been successfully inserted.

- **Function 2: Show all registrations – 100 LOC**
  - The screen is divided into 2 parts: main information and detailed information.
  - Main part: this part lists all available registrations with their information (RegistrationID, Full name, age, gender, phone, address)
  - Detailed part: when you click a row on the table or the Find by ID button is clicked, system calls findByRegistrationID method **(50 LOC),** if the application finds a match RegistrationID. The details of the respective registration are displayed following information as RegistrationID (disable), full name, age, email, phone, address, number of members, number of children, number of adults.
  - Four buttons Find by ID, Add new, Save and Remove button are put in detailed part.



- **Function 3: Update registration – 50 LOC**
  - The user clicks on the registration that she wants to modify on the registration table.
  - The details of the respective registration are displayed.
  - The user changes the information of the registration (not allow modify the RegistrationID). The user clicks the Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system will update registration information.
  - The registration table must be refreshed after data has been successfully updated.
- **Function 4: Remove registration – 50 LOC**
  - The user clicks on the registration that she wants to delete on the registration table.

    Then users click the Remove button.
  - The program must display a message to confirm the deletion. If the user confirms, system will delete the selected registration.
  - The registration table must be refreshed after data has been successfully deleted.
- **Function 5: Search by registration name – 50 LOC**
  - The user enters a string name that she wants to find on the registration table.

    Then user clicks the Search by name button.
  - The registration table will display all data row that their registration name contains the string name was entered above, otherwise system will display a message to notify that can not found any the reigstration name.
  - The registration table must be refreshed after data has been successfully find.
- **Function 6: Sort by registration name – 50 LOC**
  - The registration table displays the data in unsorted status. The user clicks on a combo box (sort by name) that she wants to sort the data on the registration table.
  - When the user choices the ascending option on the combo box, the system calls sortAscendingByRegistrationName method. The data will be sorted ascending and displayed on the registration table.
  - When the user choices the descending option on the combo box, the system calls sortDescendingByRegistrationName method. The data will be sorted descending and displayed on the registration table.
  - The registration table must be refreshed after data has been successfully sort.

- The above specifications are only basic information; you must perform a requirements analysis step and build the application according to real requirements.
- The lecturer will explain the requirement only once on the first slot of the assignment.