Radiology Information System User Documentation

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Installation

To install the system:
1. Download and extract the source files
2. Compile the java source files located in WEB-INF/classes/
   a. Execute "javac *.java"
3. Setup the database
   a. Execute the setup_new.sql script
   b. Execute the setup_more.sql script
4. Input your sql database username and password in the file dbconnect.jsp
5. Start the web server
   a. Execute "starttomcat"

Login

The login module allows users to login and logout of the system.

Login

1. Navigate to the login page
   a. Determine the hostname
   b. Determine the local tomcat port
   c. Open a web browser
   d. Navigate to "hostname.cs.ualberta.ca:tomcatport/391_Project/login.jsp
2. Enter a username and password
3. Click **Login**

Logout

1. Click **Logout** on the right-hand side of the menu bar

User Management

The user management module is broken down into three submodules accessible from the **User Management** dropdown in the menu bar.

Manage People

This submodule allows an administrator to add a new person to the database, or edit an existing person's personal information.

Add New Person

1. Click **Add New Person**
2. Fill out the displayed Person Info form
3. Click **Update**

Edit Existing Person

1. Select a person from the dropdown list of existing persons

2. Click **Select Person**
3. Edit the displayed Person Info form
4. Click **Update**

Manage Users

This submodule allows an administrator to add a new user to the database, or edit an existing user's password.

Add New User
1. Click **Add New User**
2. Fill out the displayed User Info form
3. Click **Update**

Edit Existing User
1. Select a user from the dropdown list of existing users
2. Click **Select User**
3. Edit the displayed User Info form
4. Click **Update**

Manage Patients

This submodule allows an administrator to add or remove patients associated with a doctor.

Add a Patient to a Doctor
1. Select a doctor from the dropdown list of doctors
2. Click **Select Doctor**
3. Select a patient from the dropdown list of patients not currently associated with the selected doctor
4. Click **Add**

Remove a Patient from a Doctor
1. Select a doctor from the dropdown list of doctors
2. Click **Select Doctor**
3. Select a patient from the dropdown list of patients currently associated with the selected doctor
4. Click **Remove**

Generating Reports

The report generating module allows an administrator to find all patients with the given diagnosis within the given time period. Patients returned have at least one radiology record where the diagnosis contains the exact phrase entered. Only the earliest testing date will be returned for each patient along with the patient's name, address and phone number.

To generate a report:
1. Enter a diagnosis

2. Select the earliest testing date
3. Select the latest testing date
4. Click **Submit**

Uploading Records and Images

The uploading module allows a radiologist to enter radiology records and upload images associated with the record.

To enter a radiology record:
1. Select a patient
2. Select a doctor
3. Fill out the rest of the form
4. Click **Upload**

To upload one or more images associated with a radiology record:
1. Enter a radiology record
2. On the following page, click **Browse...** and open a JPEG image
3. Click **Upload**
4. Repeat steps 2-3 for additional images

Searching Records

The search module allows all users to search for radiology records using keywords, a time period or both. Records returned are filtered according to the security table below.

Security

User Class	Viewable Records
Administrator	All
Doctor	Only records where he/she is the listed doctor
Radiologist	Only records entered by he/she
Patient	Only records where he/she is the listed patient

To search for radiology records:
1. Optionally enter keywords
2. Optionally enter the earliest testing date
3. Optionally enter the latest testing date
4. Choose to sort records by **Newest First**, **Oldest First** or **Rank**
5. Click **Fetch**

To view full-size images associated with a radiology record:

1. Search for radiology records
2. Click the thumbnail of an image

Data Analysis

The data analysis module allows an administrator to generate an OLAP report.

To generate an OLAP report:
1. Optionally select a single patient, or all patients
2. Optionally select a single test type, or all test types
3. Choose a time hierarchy of **Weekly**, **Monthly**, or **Yearly**
4. Optionally select a single year, or all years
5. Click **Start Generation**