

User Documentation

Home Page

The home page has no real functionality but is used as a hub to the other pages. Once logged in the user is directed to the home page where they are welcomed and told of the use of the Radiology Information System. From here they can access the other modules to do the real work. If the user accesses the home page and is not logged in they are told that they can log in by clicking the login button at the top right of the header.

Login Module

The login module is a simple interface used to gain access to the Radiology Information System. The user must be stored in the database and will only gain access to the system if they input the correct password. This module is linked to the User Management module because the Admin has the ability to add users and change their passwords. When a user logs in they have a specified class, they can be either administrators, doctors, patients, or radiologists. They will only be granted access to certain functionalities of the site based on their class. The administrator has the ability to use the Uploading, User Management, Report Generating, Search, Data Analysis and User Settings functionality. The doctors and patients will only have access to the Search, and User Settings modules. Radiologists can access the Uploading, Search, and User Settings modules.

When the user logs in and provides a user name that is not in the database, or a password that does not match the user they will be redirected back to the login page where a message will display that the wrong login information was provided.

User Settings is accessible to every user. In this section of login module the user can change their password and all of the personal information that was inputted when the user was created. When changing the password the user must input the new password, and re-enter it to make sure they match and that is the password that they want. If the passwords and their old password is correct the password will be changed. Also when the user changes his or her personal information the password is checked to ensure another level of security.

Each module has a check before it displays the page that will check the class of the logged in user and will not grant access to the page if they do not have the correct class. This module is to provide security as well as restrict accessibility to the people that should be able to use the system.

Data Analysis

The Data Analysis module is used to produce an OLAP report that will tell the Administrators of the system needed information. Only administrators have access to this module. When the administrator clicks the Data Analysis button at the top of the page in the header they will be asked on what information they want to query. They have the choice of three parameters, they can query based on patient name and time, or test type patient name and time. When the test type radio button is selected a drop down menu will appear so a patient can be selected. Once the information is submitted a report is generated.

The reports will display the number of records of each type of test each patient has had based on the time specified. If year is specified the report will be broken down by year. This also

follows with week and month. The week and month are displayed based on the number of any particular year. For example Dec 31 will be the 12th month and 52 week (except for leap year where it is 53rd). The report is displayed in an easy to understand table that can be printed off using your browser's print function.

If the user decides to generate the report based on test type, they must select a patient to query on. The report generated will follow the same format with regards to time as described above. However, now only the information of the selected user will be displayed for the administrators use.

Search

The search module is used by the user to view their own records and test results. The administrator will be able to search over all patients but any other user will only be able to view their own. The search page has a simple interface that allows the user to query the tables based on keywords and restrict the results based on time. The time field is not required to display the results. The results are displayed in an easy to read table that has sorting functionality. If the user wants to sort the results based on date they can click on the date header and it will sort, click again and it will reverse the order. The default sort is based on rank which displays the most relevant result first.

Report Generating

The report generating module is used by administrators to generate a report of all the patients with a certain condition based on a time period. The time fields are necessary to narrow down the results that are returned. If the user was to view a report of patients diagnosed with cancer from 2001 to 2010 then they can input this into the query fields and press submit and a report will be generated in a table format that is easy to read.

User Management

The User Management module is used by the administrator to view and edit the information of a user on the Radiology Information System. The administrator can change the user's password, class, and all of the personal information. The most important part of the user management module is that the family doctor can be inserted or updated. This module has a very straight forward interface, just input the information and press submit.

Uploading

The uploading module is used by radiologists and administrators to upload radiology records and images from the tests that have been performed. To use this module press on the upload button at the top of the page. This fill out the form with the patient information and diagnosis. To use the time fields just click on select and a calendar will pop up, select the date that you want and press submit. Once the information is submitted the user will be asked to upload the image. Press browse and select the image to upload. Then input the filename and press submit. The image will then be saved in the system.