GUI Programming Main Assignment

Module Title:	GUI Programming Main Assignment
Assignment Type:	Main Assignment
Project Title:	Health Record Management System
Project Date:	21th October 2016
Assignment Compiler:	Kyle Goslin
Weighting:	Marked out of 100, worth 25%
Due Date:	December 11th 2016
Method of Submission:	Moodle uploader on course page
Feedback Method:	Provided once graded through Moodle Feedback

Assignment Introduction

A doctor has contacted you to develop a solution for managing the patient records of his practice. The doctor is having issues finding records of current patients and would like a solution that will make finding the patients easier, allowing for a faster turnaround time with the billing for clients.

The system that will be developed is an all-encompassing solution which all of the different staff members in the doctors practice will be using.

Account Types

The system should have three user account types, each of which can all login from the same login window. Depending on their account type, they will be sent to a different dashboard where they can choose the task they wish to complete.

- **Receptionist** – Mainly focused on making appointments in the system and taking different messages which have been left for the doctor.

- **Doctor** – The doctor can view all of the messages which have been left for him, search for different patients in the database, and take notes about the current patient and make notes about the time they visited and details of the different medication which have been prescribed to them.

- **Billing Department** – This account type is only focused upon the billing aspects of the practice. Every week, all of the bills for each customer will be added up and a complete total should be added which is then printed and given to the customer. A method should exist which will create the letter structure for the client to make it easier to see what they are being billed for, when they visited and how much the current bill totals to.

System Requirements

- A method must exist in the system which allows the billing manager of the practice to search for a client. After they have found the client they are interested in, all of the bills for that client up to the current date must be shown. The current status of each bill should be shown, outlining if they are paid or unpaid. A method should exist to change the status of a bill to PAID or UNPAID.
- A method should exist which allows the receptionist keep a log of all of the phone calls which are made to the doctors practice. A note taking system should be included which allows the receptionist to take a note, the current date and time and also the phone number which the customer can be reached on.
- When the doctor logs into the system, the main dashboard of the system should contain a list of all the messages that have been left for the doctor. If the doctor has received the message, the doctor should be able to flag the message to say that it has been received and it should not appear again on his dashboard.
- The doctor should be able to search the system for each of the different clients he has been working with. When the doctor selects the client they are interested in, all of client profile window should open showing the doctor all of the information about the client including their name, address and telephone number, any messages which have been left with the receptionist regarding the current client and also a list of all of the medical history and medications which have been prescribed to them.
- The doctor is very concerned about the different medications which are prescribed to each of the clients. At the end of this document is a list of the different medications which are prescribed to different clients. If two medications from the same category are prescribed to a client, a method must exist in the system which will alert the doctor in the future whenever the doctor opens their dashboard.
- All of the information which is entered by the receptionist, doctor and billing manager must all be stored in individual database tables. Each table must contain an ID column which is unique and auto incremented. This will allow the process of deleting individual records to be much simpler**.**
- As human errors often occur, options should exist in the system which will allow patient records to be deleted and also different bills in the system. When they are deleted, they should be removed from the database and also from the GUI the user is currently viewing. You may need to fresh the GUI to ensure that the latest information is being shown.
- When the program first opens, all of the information relative to that users dash board must be loaded.
- The customer is interested in having menus added to the top of their application to make the process of technical support easier. Devise a collection of menus which can be added to the top of the application, and each of the elements which should be added. Each of the dashboard for each user type should have their own menu items added.
- A method should exist in the program which will allow the current user to logout of the system. When this happens, the current window should close and the login screen should be opened.
- The entire project should be packaged as a single runnable jar file which can easily be installed on a users' system.
- When a client is finished with the doctor, they must settle their bill. To do this, when a client leaves they will speak to the receptionist who will create a new bill for the customer. The bill should contain a list of each different type of service they just received and the price which is associated to it. e.g,

general doctors visit: 50 euro, prescription requested: 30 euro etc. Each of these options should be available to the receptionist from a drop down menu, preventing them to randomly enter in their own types of fees. Fields for the current date and time must also be added. These should be populated by calling Java libraries to get the current date and time. A reference to the patient's medical file should be stored with the bill in the database to ensure they can be tracked in the future.

- The fields to enter the username and password into the system must be validated to ensure the user does not attempt to login without details or incorrect details. Use a JOptionPane to prompt information to the user if a login was unsuccessful.

Going for an A grade?

- If you want to get the highest marks for this assignment you should add in the ability for a doctor to type in the name of a medication and return the page from a medication database such as http://www.rxlist.com/script/main/hp.asp and embed the results into a custom JFrame for browsing medications.
- During the process of logging into the system, all of the logins including timestamps of when the login occurred should be saved to a special logging database table. If a user account fails to login three times in a row, the user should be locked out of their account for 2 minutes and then allow to login if their details are correct. A message should be prompted to the user to tell them that their failed attempts have been logged in the database.

Remember

Planning is the most important part of this project to ensure success. Make sure you develop **the wire frames and the database structure** before you begin the coding process!

Deliverables

- Application code
- Wireframes for the application
- Database CREATE and INSERT code export

All files must be zipped up as single file and uploaded to Moodle before the deadline. No late submissions will be accepted. All code that is created **MUST BE YOUR OWN CODE** this is an individual assignment, not a group assignment.

List of medications

Category A	Category B	Category C
VND 1	X34	543H
XXV 2	HH5	344BB
HNF 232	DDF23	JUY9
GB334	JHH7	232B