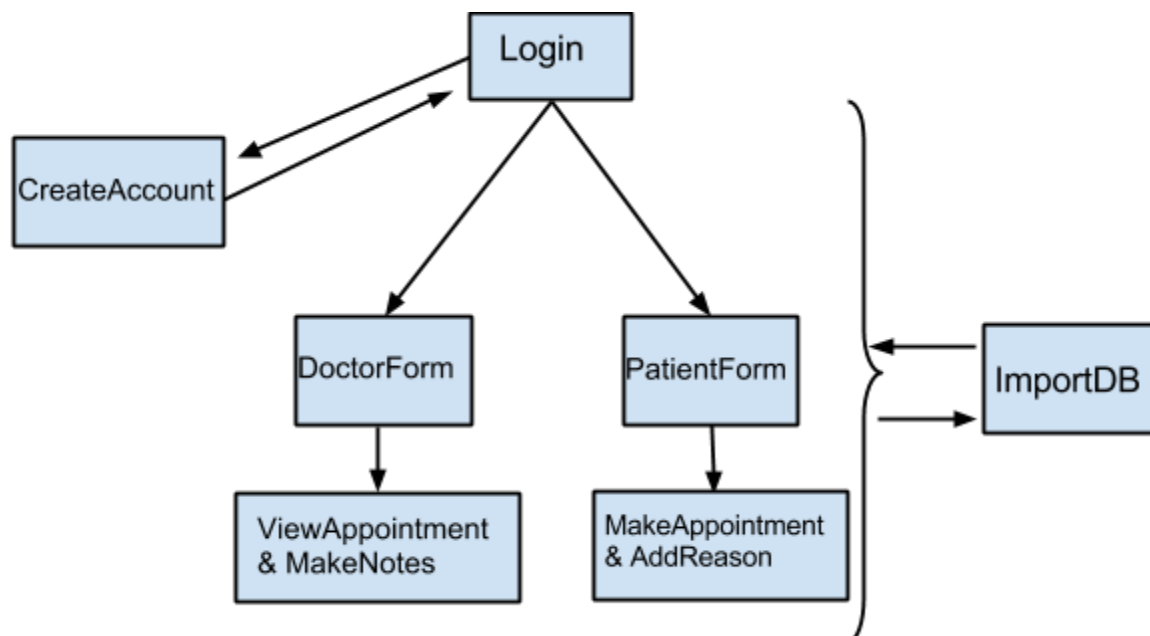# Components

1. Login - Called by create account and upon program launch. Input is username and password. Output is login check, if successful, calls PatientForm module or DoctorForm depending on account type. .
2. Create Account - Called by login module. Upon account creation, user is brought back to login page
3. DoctorForm - Contains all of a doctor's information and has a tab to view appointments. Logout will bring user to login page.
4. PatientForm - Contains all of a patient's information and has a tab to view appointments. Logout will bring user to login page.
5. Make Appointment & AddReason- Allows a patient to make an appointment and add a reason for visit. Also allows patient to view doctors information
6. View Appointment & MakeNotes- Allows a doctor to see information about appointment. Also allows a doctor to make notes
7. ImportDB - Contains all interactions with the database. Every module is able to make function calls from this Module.

No	Component Name	Caller Module	Called Module
1	Login		Create Account, DoctorForm, PatientForm

2	Create Account	Login	
3	DoctorForm	Login	View Appointment & MakeNotes
4	PatientForm	Login	Make Appointment & AddReason
5	Make Appointment & AddReason	PatientForm	
6	View Appointment & MakeNotes	DoctorForm	
7	ImportDB	Login, Create Account, DoctorForm, PatientForm, Make Appointment & AddReason, View Appointment & MakeNotes	

We will be doing top down testing, starting from create account module and working our way down. This will allow us to use the test data and test results from previous modules for all the other modules.

Defects Found From Incremental Testing

Defect	Description	Severity	How Corrected
1	Component 2: CreateAccount is not prompting user that username has been taken. Test #008 says "User will get a prompt saying that account with username already exists."	2	Added uniqueness check in createAccount in importDB so it returns null to prompt the response
2	Component 2: According to test #005, user should get a prompt upon successful account creation. Not happening.	2	Create prompt to launch upon successful account

			creation
3	Component 3: Test #022 fails.Not checking for valid phone # entry.	2	Type check for phone number format
4	Component 3: Patient Account Information Date does not indicate that input in text field must be in format mm/dd/yyyy.	3	Type check for proper date format
5	Component 3: Upon new account creation with nothing entered yet, GUI displays message "Welcome null"	3	Put in a dummy value for username
6	Component 3: Welcome message truncates any name to be 4 characters then "..."	2	Expand size of text field
7	Component 3: Patient Date of Birth can be out of bounds (patient can be born in the future).	2	Put checks on the date entered
8	Component 3: Patient Gender will accept any string. (must be radio button)	2	Changed to radio button group
9	Component 3 :Welcome prompt doesn't update if patient's name is changed upon save.	2	Added check for not null patient name and then print it in welcome message
10	Component 3: When listing emergency contact, or any text field for that matter, you will get an SQL failure if you have a string that is too long. Additionally it should not show the credentials approved window in case of server failure.	2	Expanded size of text box and it fixed the problem.

11	Component 3: Using column index in JTable so switching columns will cause the system to crash	1	Make the column header not adjustable
12	Component 4: Doctor account information does not change GUI display message from "Welcome username!" even after logout and login.	3	Remove static statement and prints the field instead
13	Component 4: Doctor information save states that information is saved but does not retain phone number.	2	Edit query to include phone number
14	Component 4:Doctor's phone number text field will accept any string.	2	Do type checking on the input. Phone numbers only accept digits up to 10 digits.
15	Component 5: Exiting an appointment window closes entire program	1	Change property to "dispose"
16	Component 5: Could not make a new appointment. (querying from wrong table)	2	Query the count(*) from appointment table not account table
17	Component 5: The date for scheduling doctor appointments is not type safe, will accept any string	2	Type check the input string
18	Component 5: When you schedule a doctor's appointment it doesn't take you back to the old form.	2	Update the segue to send user back to userpage

19	Component 5: Date format fixed but it is possible to enter past dates into the appointment field	3	Compare entered date with the current date.
20	Component 6: View appointment doesn't show doctor name and shows error in log. no '=' in query	2	Do "where did = 'id'" not "where did 'id'"
21	Component 6: Doctor appointment info shows same appointment info for entire list. (forgot count++)	2	Increment counter in while loop
22	Component 6: Appointment number is incorrect	2	Create a new list so it is using position as appointment number instead of the appointment id
23	Component 3: Using column index in JTable so switching columns will cause the system to crash	1	Make the column header not adjustable

Regression Tests

Test	Description	Severity	How Corrected If Defect Found
1	All components: make sure SQL statements are correct such that	1	

	information can be stored and retrieved.		
2	All components beside ImportDB: should allow transitions between frames such that navigating between forms is easy and intuitive.	2	
3	Component 1 - 6: All textboxes should ignore special characters like ' because it can jeopardize the sql statements	1	SQL statements are manipulated using PreparedStatements to ensure the database is parametrized and to prevent SQL injection
4	Component 1-6: Test if closing any components will not terminate entire program	1	Forms should be "disposed"
5	Component 2: When creating account, test consistency with the database causing the account not to be created when it should have been.	1	Changed the field constraint in the database
6	Component 2: Only way to get back to login component from createAccount is to make an account.	2	Fix cancel button to actually redirect you back to login
7	Component 5: When scheduling an appointment the page listing them does not update in real time, but will after logging out and logging back in.	2	Move the update table function into the button for scheduling appointments rather than the close button.

8	Component 6: Notes were added to viewAppointment which is based off of makeAppointment, component 5. MakeAppointment was affected and there is a giant empty space now.	3	Had to fix the size of frame of MakeAppointment
9	Component 6: Renumbering problem is fixed, however, it created new defect: when nothing is selected from list, exception error because the database received a null value to lookup as a parameter for pid.	1	Do a check for no row selected so it does not call the function if it is null