

## Class Responsibility Collaboration (CRC) Cards

AuthenticationController	
Responsibilities	Collaborations
Know <i>LoginAttempt</i>	
Handle login request	LoginAttempt
Know <i>Cryptography</i>	
Encrypt any information being passed out to other controllers	Cryptography
Decrypt any information being provided from other Controllers	Cryptography
Know <i>Messaging</i>	
Send requests to other controllers using the universal format	Messaging

Cryptography	
Responsibilities	Collaborations
Provide encryption services for data	
Provide decryption services for data	

Database	
Responsibilities	Collaborations
Be able to insert new users, new notifications, new medical information readily	
Be able to remove users, notifications and medical information readily.	

DBController	
Responsibilities	Collaborations
Know <i>UserSearch</i>	
Search for the location or to assert the existence of a user in the database.	UserSearch
Know <i>DB</i>	
Handles information requests by interpreting the required information and retrieving it from the database.	DB
Know <i>Cryptography</i>	
Encrypt information before sending it out to any controllers	Cryptography
Decrypt information before it can be used	Cryptography
Know <i>Messaging</i>	
Forward any information that is required to be sent to another controller to <i>Messaging</i> ,	Messaging

specifying the information and the target controller.	
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InterfaceController	
Responsibilities	Collaborations
Know <i>LoginPage, ProfilePage</i>	
Handle requests to change page displayed to the user's device	LoginPage

InterfacePage	
Responsibilities	Collaborations
Model all the content and information to be displayed on the user's device	

LoginAttempt	
Responsibilities	Collaborations
Locks login attempts for five minutes by a user who made three consecutive failed login attempts.	
Handles requests to login to the system	
Know <i>AuthenticationController</i>	
Retrieve the username	AuthenticationController
Retrieve the actual password	AuthenticationController
Retrieve the attempted password	AuthenticationController

LoginPage	
Responsibilities	Collaborations
Know username entered by user	
Know password entered by user	
Know <i>InterfaceController</i>	
Handle button-click event of <i>Submit</i> button	InterfaceController
Provide user with message informing them that the procedure of logging out was successful.	

MainMenuPage	
Responsibilities	Collaborations
Know the user identity	UserIdentity
Know the privileges of the user	UserInfo
Know <i>UserIdentity, UserInfo</i>	
Display icons for all pages authorized to the user to access from the following list of pages:	

<i>LoginPage, ProfilePage, MainMenuPage, SchedulePage, MedicalPage, ManagementPage</i>	
Know the following list of pages: <i>LoginPage, ProfilePage, MainMenuPage, SchedulePage, MedicalPage, ManagementPage</i>	
Know <i>InterfacePage</i>	
Handle click events of the following icons <i>logout, view medical info, manage users, notifications, view schedule, view profile</i>	InterfaceController

<b>ManagementPage</b>	
Responsibilities	Collaborations
Know the target user for the operation	
Know the information of the user (during the process of modifying or adding a user)	
Know <i>InterfaceController</i>	
Retrieve the identity of the user in the system	InterfaceController
Handle request to add a user to the system.	InterfaceController
Handle request to remove a user from the system.	InterfaceController
Handle request to modify an existing user in the system	InterfaceController

<b>MedicalInfo</b>	
Responsibilities	Collaborations
Model the medical information for any user	

<b>MedicalPage</b>	
Responsibilities	Collaborations
Present the user with a medical information of the user.	
Know <i>InterfaceController</i>	
Know the patient	InterfaceController
Know the patient's medical information	InterfaceController

<b>Messaging</b>	
Responsibilities	Collaborations
Handles requests to send information from one controller to another by packaging the information for the target controller and passing it over to the controller	

Know <i>InterfaceController</i> , <i>NotificationsController</i> , <i>AuthenticationController</i> , <i>DBController</i> and <i>Schedule Controller</i>	
Know message including: target controller, information to be sent	<i>InterfaceController</i> , <i>NotificationsController</i> , <i>AuthenticationController</i> , <i>DBController</i> , <i>Schedule Controller</i>

<b>NotificationsController</b>	
Responsibilities	Collaborations
Know <i>Notification</i>	
Provide <i>InterfaceController</i> with notifications when they are created	
Create a notification for a scheduled appointment 48 hours prior to the starting time of the appointment.	<i>Notification</i>
Create a notification for an upcoming required or recommended immunization update two weeks prior to its first possible date of admission	<i>Notification</i>
Know <i>DBController</i>	
Know the start of scheduled appointments of the user	<i>DBController</i>
Know the pairs of (1) immunization events, and (2) date of event for the user.	<i>DBController</i>

<b>Notification</b>	
Responsibilities	Collaborations
Models the notifications used by the system	
Know the message	<i>NotificationsController</i>
Know the date the notification was created	<i>NotificationsController</i>

<b>PlotWidget</b>	
Responsibilities	Collaborations
Generate a plot with all of the points, labeling the x-axis and y-axis.	
Know <i>OperationsController</i>	
Know the pairs of values to plot	<i>OperationsController</i>
Know the labels (x-axis and y-axis)	<i>OperationsController</i>

<b>ProfilePage</b>	
Responsibilities	Collaborations
Know the user	

Know the user's information: first name, last name, address, date of birth, phone number, Ontario Health Insurance (OHIP) number of patient	
Display first name, last name, address, date of birth, phone number, Ontario Health Insurance (OHIP) number of patient	
Know <i>DBController</i>	
Know first name, last name, address, date of birth, phone number, Ontario Health Insurance (OHIP) number of patient	DBController

<b>Schedule</b>	
Responsibilities	Collaborations
Know ScheduleEvent	
Model each appointment or other event. Each appointment or event contains: a starting time, a duration, and the purpose of the event.	ScheduleEvent
Models the schedule for each user. Contains a list of appointments and other events.	

<b>ScheduleController</b>	
Responsibilities	Collaborations
Handle requests to add appointments	ScheduleRequest
Handle requests to remove appointments	ScheduleRequest
Know Schedule Information, Schedule Event, Schedule, <i>Messaging</i>	
Retrieve schedule information	Messaging
Interpret schedule information	Schedule Event, Schedule
Retrieve appointment request information	Messaging
Know ScheduleRequest	
Handle appointment request	ScheduleRequest

<b>ScheduleEvent</b>	
Responsibilities	Collaborations
Model each appointment or other event. Each appointment or event contains: a starting time, a duration, and the purpose of the event.	

<b>SchedulePage</b>	
Responsibilities	Collaborations

Provides a visual display of the schedule for a user.	
Know user	
Know events or appointments associated with the user's schedule.	
Retrieve user	InterfaceController
Retrieve events and appointments associated with the user's schedule.	InterfaceController

<b>ScheduleRequest</b>	
Responsibilities	Collaborations
Models an appointment or event request which includes the following information: starting time of event/appointment, its duration, and its purpose.	
Handle requests to add an appointment to a schedule by checking for conflicts with relevant events and appointments that exist.	
Know <i>ScheduleController</i>	
Know the following information about a requested event or appointment: starting time of event/appointment, its duration, and its purpose.	ScheduleController

<b>User</b>	
Responsibilities	Collaborations
Know <i>UserInfo</i>	
Model the first name, last name, phone number, address, date of birth, Ontario Health Insurance number (OHIP), access privileges of the user associated with the current session	UserInfo
Models the username and password of the user.	
Models the medical information of the user.	

<b>UserInfo</b>	
Responsibilities	Collaborations
Model the first name, last name, phone number, address, date of birth, Ontario Health Insurance number (OHIP), access privileges of the user associated with the current session	

<b>UserSearch</b>
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Responsibilities	Collaborations
Be able to readily provide the information associated with a username to the devices of authorized users.	
Know <i>DBController</i>	
Know the username	DBController