Design Inspection/Code Review #1
Team Packat.tk

Product	Android Login Design Inspection
Date	02/12/2015
Author	Matthew Tracy
Inspectors	Matthew Tracy

Defect #	Description	Severity	How Corrected
1	Application would not launch	1	Change Android manifest to designate login activity as launch activity
2	Successful login went to a generic page when student and administrator use different functionality	2	Set separate intents and created activities for both a successful user login and admin login.
3	New users could not register	3	Add registration functionality in addition to login functionality to the login page (only for new users, not admins)

Product	Java Server Login Verification Design Inspection
Date	02/12/2015
Author	Cris Shumate
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected

1	Server doesn't respond to login request from Android application or website.	1	Ensure that a message is always returned, whether it's "SUCCESS" or "FAILURE"
2	Server hangs up handling a login request, slowing the handling of other requests	2	When requests (of any kind) come in, handle them on a separate thread so server socket remains open.
3	Server runs slowly	3	Check validity in client to reduce work for server

Product	Web Front-end Login Page Design Inspection
Date	02/12/2015
Author	Alex Hamlin
Inspectors	Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Titles are not included in pages on the server	3	Include annotations in UI classes to add titles to each page
2	Server is unable to open a socket for communication with the Android app	1	Create a servlet to utilize Vaadin and HTTP when handling Android requests
3	Server code will not compile and run when checked out on new machines	1	Rebuild the Vaadin widget set for new checkouts by running `mvn clean install` in the root server directory

Code Inspection

Product	Android Login Code Inspection
Date	02/12/2015
Author	Matthew Tracy
Inspectors	Matthew Tracy

Defect #	Description	Severity	How Corrected
1	Checks for valid passwords would go straight to the server	3	Do validation checks in the android app to see if they fulfil email and password requirements
2	Excessively long conditional statements for checking if characters were spaces, lowercase, etc.	2	Add a character class to contain helper functions to reduce redundancy and reduce proneness to bugs
3	Intent switches not present	1	Add intents to switch activities when successfully logging in

Product	Java Server Login Verification Code Inspection
Date	02/12/2015
Author	Cris Shumate
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected

1	Client would not finish writing code to server and would wait indefinitely	1	Flush buffered writer after writing message to socket
2	If a username/password with a space gets passed the code would crash	2	Read entire line, not just until another space is reached
3	Potential for bugs with client and server sending different messages	3	Specify String constants that define the types of messages, so that client and server are always on the same page
4	Not differentiate students and administrators login	2	Return different flags for successful user groups

Product	Web Front-end Login Page Code Inspection
Date	02/12/2015
Author	Alex Hamlin
Inspectors	Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Pressing the enter key in the login form does not allow the user to enter the web app	3	Add a keyboard listener to ensure that the enter button can be used
2	The password confirmation field in the account creation dialog is not required	3	Modify the properties of this field to ensure that it is required before submission
3	Non-email usernames are allowed in the account creation dialog	2	Add email validation to the email field
4	An SQL injection vulnerability may exist when submitting usernames and passwords	1	Utilize prepared statements when interacting with the database

5	Password field shows password in plain text when logging in via the web	3	Field type was changed in order to ensure that typed passwords are hidden

<u>Unit Testing</u>

Product	Android Login Unit Testing Inspection
Date	02/12/2015
Author	Matthew Tracy
Inspectors	Matthew Tracy

Defect #	Description	Severity	How Corrected
1	Passwords without '@' Character Present	1	Add conditional branch to check if '@' character is present in email
2	Empty passwords could be used for logins	3	Establish a minimum length of 5 and maximum length of 20 for passwords
3	Emails with invalid addresses presented for registration	2	Have application check length, suffix, and prefix to ensure that it is a possible email address.

Product	Java Server Login Verification Unit Testing Inspection
Date	02/12/2015
Author	Cris Shumate

Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Unexpected message received	1	Add statement while parsing request that will handle invalid requests
2	If the credentials passed aren't found the client doesn't receive a message back	2	Return "FAILURE" when the credentials aren't valid/aren't in the database
3	When multiple clients send messages at once the response is slow	3	Handle requests on separate threads so no one request is waiting too long

Product	Web Front-end Login Page Unit Testing Inspection
Date	02/12/2015
Author	Alex Hamlin
Inspectors	Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Passwords of over 20 characters allowed on web but not in Android	2	Validation was corrected to ensure a password length of between 5 and 20 characters
2	Blank usernames and passwords are allowed in the login dialog	3	Add validation to the username and password fields
3	Blank or short passwords are allowed in the account creation dialog	3	Add length validation to ensure a minimum password length