100 Defect Log for AIM(Android Instant Messenger)

Defect #	Description	Resultant Ouput (Ater Seeding)	Resultant Ouput (before Seeding)	Suggestioned Corrections	How can the defect be caught	Severity Level
1	Welcome activity is terminated after it start SignUp activity or Login activity.	Click back button will exit this app.	Click back button will return to the Welcome page.	Do not call finish() method after SignUp activity or Login activity starts.	Black box.	3
2	Once AddFriend button is not created, a NullPointerException is thrown.	If AddFriend button is not created, a NullPointerException is thrown.	If AddFriend button is not created, an alert should be shown.	Added a statement to check if the AddFriend button is created correctly.	White box.	1
3	The Login activity is not terminated after user successfully login. Once user login successfully, once he or she click the back button, it	After user login successfully and click the back button, it returns to the Login page.	After user login successfully and click the back button, it exits.	Call finish() method once the return value from the isUserAuthenticated() method in imService is true.	Black box.	2

	should not return to the login activity page.				
4	Empty username is not checked. Entering empty username can login, which should not happen.	A empty username is enter, and Login button is clicked, it shows that username and password not match.	A empty username is enter, and Login button is clicked, it shows username cannot be empty.	Check the length of the entered username if it is greater than zero once user click the Login button.	Black box.	1
5	Empty password is not checked. Entering empty password can login, which should not happen.	A empty password is enter, and Login button is clicked, it shows that username and password not match.	A empty password is enter, and Login button is clicked, it shows password cannot be empty.	Check the length of the entered password if it is greater than zero once user click the Login button.	Black box.	1
6	For user who has already login, the Welcome page is still shown once this app is launched, which should not happen.	After login successfully, user launches this app again, the Welcome page is shown.	After login successfully, user launches this app again, the Main page is shown.	Once the Welcome activity is stated, it connects to the server to check if the user is already login by calling	Black box.	2

				isUserAuthenticated() method from imService(). The Welcome page will only be shown up if user has not login.		
7	Once Cancel button is not created on the AddFriend page, a NullPointerException is thrown.	If Cancel button is not created, a NullPointerException is thrown.	If Cancel button is not created, an alert should be shown.	Added a statement to check if the Cancel button is created correctly.	White box.	1
8	Empty username is not checked. Entering empty username can sign up, which should not happen.	After an empty username is entered, and SignUp button is clicked, user can successfully sign up.	After an empty username is entered, and SignUp button is clicked, it will show that username cannot be empty.	Check the length of the entered username if it is greater than zero once user click the SignUp button.	Black box.	1
9	Empty password is not checked.	After an empty password	After an empty password	Check the length of the entered	Black box.	1

	Entering empty password can sign up, which should not happen.	is entered, and SignUp button is clicked, user can successfully sign up.	is entered, and SignUp button is clicked, it will show that password cannot be empty.	password if it is greater than zero once user click the SignUp button.		
10	Empty email address is not checked. Entering empty email address can sign up, which should not happen.	After an empty email address is entered, and SignUp button is clicked, user can successfully sign up.	After an empty email address is entered, and SignUp button is clicked, it will show that username cannot be empty.	Check the length of the entered email address if it is greater than zero once user click the SignUp button.	Black box.	1
11	Enter two different passwords can sign up successfully, which should not happen.	After two different passwords are entered, and SignUp button is clicked, user can successful	After two different passwords are entered, and SignUp button is clicked, it will show that two	Check if the contents in two password fields are identical, if not, promote an alert to ask user enter two identical	Black box.	1

		ly sign up.	passwords are different, please enter two identical passwords.	passwords during sign up.		
12	Entering a username not in the valid length can still sign up successfully.	An username in invalid length can sign up successfully.	An username in invalid length will make the app pop an alert saying that the username is in invalid length.	Check the length of the entered username, if it is not in the valid length, promoted an alert.	Black box.	1
13	Entering a password not in the valid length can still sign up successfully.	An password in invalid length can sign up successfully.	An password in invalid length will make the app pop an alert saying that the password is in invalid length.	Check the length of the entered password, if it is not in the valid length, promoted an alert.	Black box.	1
14	The first unapproved	The first unapprove	The unapprov	Make the loop starts	White box.	1

	friend request is not shown and when there is only one unapproved friend request, nothing will be shown.	d friend request is not shown and when there is only one unapproved friend request, nothing will be shown.	ed friends list is shown correctly.	from the index 0 but not the index 1.		
15	The Cancel button in the AddFriend activity is not functioning properly.	Once the Cancel button is clicked, nothing happens.	Once the Cancel button is clicked, it exits the AddFriend activity.	Call finish() method once the Cancel is clicked.	Black box.	1
16	Cannot add someone with a username in a length less than 10 characters.	After an username with length less than 10 characters entered, it will show an alert.	After an username with length less than 10 but more than 0 characters entered, it sends friend request to that user.	Change the statement to check if the length of entered username is greater than 0, but not 10.	White box.	1
17	A null message is sent.	A null message can be sent	A null message cannot be sent.	Add a statement to check if the message is	White box.	1

		successful ly.		null.		
18	An empty message is sent.	An empty message can be sent successful ly.	An empty message is not sent.	Add a statement to check if the message is empty.	Black box.	2
19	Enter key is clicked on the keyboard, message is not sent.	Once enter key is clicked, the message is wrapped.	Once enter key is clicked, message is sent.	Add a key event listener. Once enter key is clicked, the Send button performs the click action.	Black box.	3
20	When the Messaging activity is terminated, the local storage handler is not closed.	When the Messagin g activity is terminated , the local storage handler has not been close.	When the messagin g activity is terminate d, the local storage is closed.	Close the local storage handler in the onDestory method of Messaging activity.	White box.	2
21	Buffered Reader is not closed after sending a request to server.	Buffered Reader is not closed.	Buffered Reader is closed after using.	Call close() method while done using Buffered Reader.	White box.	3
22	The first friend	The first	All friends	Make the	Black box.	1

	in the friend list is not listed. or if there is only one friend in the friend list, it shows there is no friends.	friend in the friend list is not listed. If there is only one friend in the list, nothing will be listed.	are listed.	loop start from 0 instead of 1 in the getFriendsLi st() in the UnApproved FriendList activity.		
23	In the UnApprovedFr iendList activity, after the user click the "approve select friends" button, this activity is not exited.	After the "approve select friends" button is click, it stays in the same activity.	After the "approve select friends" button is click, it exits current activity.	Call finish() method once the "approve select friends" button is clicked.	Black box.	2
24	In the AddFriend activity, after the user click the "add friend" button, this activity is not exited.	After the "add friend" button is click, it stays in the same activity.	After the "add friend" button is click, it exits current activity.	Call finish() method once the "add friend" button is clicked.	Black box.	2
25	In the Login activity, even the authenticateUs er() method returns null, it starts the	When the authentica teUser() method returns null, it tries to start the	When the authentica teUser() method returns null, it is treated as	Add a statement to check if the return value of authenticate User() is null,	White box.	1

	FriendList activity.	FriendList activity.	failure.	if it is null, it is treated as failure.		
26	In the Login Activity, after the Cancel button is clicked, the current activity is not terminated.	After the Cancel button is clicked, it stays at the current activity.	After the Cancel button is clicked, current activity is terminated.	Call finish() method once the Cancel button is clicked.	Black box.	1
27	Socket is not closed after use.	When done using socket, it is not closed.	When done using socket, it is closed	Call close() method when done using socket.	White box.	2
28	Print writer is not closed after use.	When done using print writer, it is not closed	When done using print writer, it is closed.	Call close() method when done using print writer.	White box.	2
29	When the notification of new message is pushed, it does not show who sent this message.	In the notification, it only displays the brief of message.	In the notification, it display the username of sender and the brief of message.	Add username in the front of the brief of message.	Black box.	3
30	In the notification panel, only the	Only the username of the	The username of the	Add the whole message	Black box.	3

	sender of incoming message is shown, but the message itself is not shown.	sender is show.	sender and the incoming message are both shown.	after the username of sender.		
31	The friend information page will always return the information of the first contact	Only the information of the first contact will be shown to the user	Information of the contact is corresponding to the contact	Change the function FriendInfo getItem(int position) to return return friends[position]; instead of return friend[0];	Black box	3
32	Useless information is also sent to the server.	Send all information of a request to the server.	Send only the information that the server needs.	Reduce the information included while sending a request.	White box.	3
33	While trying to get the friend list, it returns null, an empty friend list is pull out.	An empty friend list is shown.	Failed to pull out the friend list.	Check if the return value is null.	White box.	1
34	Unapproved friend's name could be null and the system will crash after passing a null	NULL unapproved friend's name will be passed	NULL unapproved friend's name should not be	In function update data change the conditioner if (unApproved Friends.length >= 0) into	Black box	2

	name		passed	if (unApproved Friends.leng th >0)		
35	No notification will be created if there is someone trying to add you to their friend list	No notificatio n is shown on the context text view	"You have new friend request(s) " message should be sent to the user	uncomment the //mBuilder.s etContentTe xt("You have new friend request(s)");	Black box	3
36	The application will not be closed when trying to exit through friend list page	The exit button will simply won't work	Click the exit and the applicatio n should be closed	Uncomment the finish() function in the onMenuItem Selected() in Friendlist class	Black box	1
37	While the friend list is updated, the message list is not updated accordingly.	The message list is not updated.	The message list is updated according to the new friend list.	Add an intent used to update the message list by sending a broadcast.	Black box.	1
38	The login screen will not have a title	No title for the login view	Login page should be titled as LOGIN	uncomment the line //setTitle("Lo gin"); in Login class	Black Box	3
39	Cancel button will not react on the login	When clicking cancel	Applicatio n should exit if	uncomment cancelButton .setOnClickL	Black box	2

	page	button there won't be any response	cancel button is pressed	istener block in the login class		
40	When a new message is received, there is always a star shown in front of the username.	A star is shown in front of the username.	The username is shown correctly.	Remove the star in front of the username.	Black box.	3
41	The dialog page title will not include the contact name, instead, just "Messaging with "	No contact name is shown on the Dialog page title	"Messaging with + contact name" is shown on the Title of dialog page	change the setTitle function to setTitle("Messaging with " +friend.userName);	Black box	3
42	Timer is not stopped even after exiting this application.	Timer is not stopped.	Timer stopped once exit this application.	Call the cancel() method of timer while exiting.	White box.	2
43	While there is only one message, nothing is shown. While there are multiple messages, the first one is not	The first message is not shown or the only one message is not shown.	All messages are shown correctly.	While update the data, it should start from index 0 instead of 1.	Black box.	1

	shown.					
44	Every message contains a "lol" in front of it before it is send	An "lol" is added in front of every message	Message should be as it is	Change messageText.setText("lol"); to messageText.setText(" ");in the Messaging class onCreate function	Black Box	3
45	No contact name will be shown on the dialog page when receiving message	When receiving message the dialog page will show " says" without the username	"XXX says" should be shown on the dialog page when receiving message	Uncomment Toast.makeText(Messaging.this, /*username+*/… in the MessageReceiver function in messaging class	Black Box	3
46	No title for the sign up page.	There is no title for sign up page	"Sign up" should be the title for the sign up page	Uncomment the //setTitle("Sign up"); function in the onCreate function in signUp class	Black Box	3
47	When sign up failed and user click ok on the	User click ok of the pop up	User should stay on	Delete the finish() function in	Black Box	2

	popup window. The App goes to another page instead of staying on the sign up page	box after sign up failed and redirected to another page	the sign up page after sign up failed	the SIGN_UP_F AILED case in onCreateDi alog function in SignUp class		
48	The unapproved friend list will only work if the user add unapproved friend one by one	The unapprove d friend could only be marked one by one	The user should be able to edit unapprov ed friend whatever the way they want	Change the SQL command in the server class and make it select all satisfies instead of select one	Black Box	2
49	Didn't check if the friendlist is null or not before updating the friendinfo data, which could possibly cause the system to crash.	Friendlist could be empty before updating friendinfo.	Friendlist could not be empty before updating friend info	Check the friend the list before updating the friend info, if the friendlist is empty, retrieve the firendlist information from imService class	Black Box	1
50	When the user tries to use a password that is longer than 16 characters,	When the password is longer than 16 char, no	When password is longer than 16 char, a	created a popup window saying: "password	Black Box	3

	there is no popup window.	warning was created	pop up window is created	length should be between 5 and 16" in Checking password in Login class		
51	While checking friends, it does not check the information of the first friend.	The first one in the friend list is not checked.	Every friend in the friend list is checked.	While checking friends, it starts from index 0 instead of 1.	White box.	1
52	User could send message of any length, caused latency of message transmission.	Any length of message could be sent	A maximum of 255 char is the limit of the length of the message	In Message class, add a check of the length of the message in the message class	White box.	2
53	Empty message could be appended to message history	Message history could contain a lot of spaces when retrieving it due to the appendation of empty messages	Message should not be appended with empty messages	Add an if statement in onCreate method so that null message couldn't be appended.	White box	3

54	For messaging containing white space, it is cut into several string which may cause the connection lost.	Message with space is divided into different strings	Message should be one single string.	Changed the command format. Put the message as the last variable. While retrieving the last variable, the server just get the substring from the end of the second last variable to the end of the whole string, which makes it possible to support white spaces in message.	White box	2
55	Everytime already login user launches this application, the user needs to login again.	Login Interface is shown every time the user trying to start this application even if the user has	User shouldn't be logging in again if this applicatio n is already running and user	Add a timer and login status on the server side. The login status will maintain as true in a specific time. Once the login	White box	2

		already logged in before	back to the home	status is true, the user does not need to login again		
56	User was able to register two accounts using the same email address.and may result in a crash	Same email could be used multiple times for user	Username and emails should be identical	Check the email and username information on the Signup page before return results	Black box	1
57	The very last contact added will not be shown on the friend contact list	User will never see the friends that he or she added last	All friend contact should be normally seen on the contact list	Select Statement on the server side should be called everytime added a friend instead of being called before adding friend	Black box	2
58	The first message from a friend sent when the user was offline was not be retrieved.	The user would be always missing the first message sent by any friend when he or she	The first message sent offline by friend of user should be received as soon as the	Communication between server and client should be explored. some variables may not be properly initialized.	Black box	1

		was offline.	user got online again.			
59	If an empty message was sent from one user to his or her friend, he or she may not receive the message, but the blank message would still be saved in the database.	The blank message with space is not stored in the database	The blank message with space should be stored in the database	Comment out the blank space filter in the message class	Black Box	3
60	The user will not login if he or she inputs the correct username and password	The combination of correct password and username will result in failure in login and the app will freeze	The login should require the combination of correct username and password	Change the password check function in the Login class.	Black Box	1
61	While getting the information of friends, it does not get the information of the first friend.	The information of first one in the friend list is not returned.	The information of every friend in the friend list is returned	While getting information of friends, it starts from index 0 instead of 1.	Black box.	2

62	When a user tries to register with a used e-mail address, the system did not give a popup window. It just did not respond.	There is no popup window.	There should be a popup window telling the user that the e-mail address is already used.	Add a popup window when a user tries to register with a used e-mail address.	Black box.	2
63	An already logged in user was forced to logout when a back button was clicked.	The user was forced to exit and he or she had to login again.	The user shouldn't be forced out of the application when he or she click the back button	Add handler to back button to deal with this situation	Black box	2
64	When a user delete one message that is sent to another user, the message still displays on the other user's client side.	The deleted message is not deleted on the receiver's client side.	The deleted message should be deleted everywhere.	Update the dialog according to information stored on the server regularly.	Black box	3
65	Once a friend is put in unapprovedFriendList, it does not go out of this list	Once a contact is in the unapproved friendlist it will stuck	User should be able to delete user from the	The unapproved friendlist should be able to updaete	Black box	2

	even after the user adds this friend.	there goin to a deadlock	unapprov ed friendlist.	instead of stable.		
66	After clicking the Send button, the text field is not clear.	After clicking the Send button, the test field does not change.	After clicking the Send button, the test field is empty.	Add a statement to the button listener to clear the text field	Black box.	3
67	Once a null message is received, it prints "null" on the screen.	It prints "null".	Nothing should be printed.	Add a statement to check if the received message is null.	White box.	2
68	Once a emoji, which is installed on Android phone, is entered, it prints a weird character.	A weird character is printed.	The emoji should be printed or toast a message "invalid character".	Add a statement to check if the entered character is a abnormal character.	Black box.	2
69	User can login with invalid username and password combination which is not in the database on the server.	Can login with invalid username/ password combinati on.	Cannot login with invalid username /password combinati on.	Add a statement to check if username and password combination is in the database. And add a statement to	Black box.	1

				check if the return value of authenticate User().		
70	While a message exceed the maximum length of a message is sent, the message is cut.	A message exceed the maximum length is cut.	An alert is shown saying that the message is exceed the maximum length.	Add a statement check if the entered message exceed the maximum length.	Black box.	2
71	Add click listener right after "add friend" button was created without checking if the creation was successful. It would possibly cause the app to crash	The add friend button may not be even created.	The add friend button should have all the functionalities that it supposed to have	Check the existence of button every time before assigning a listener to it.	White Box	1
72	While checking messages, it does not check the first message.	The first one in the message list is not checked.	Every message in the message list is checked.	While checking messages, it starts from index 0 instead of 1.	White box.	1
73	A person in the unapprovedFri	The user will receive	The user should not receive	Give permission to only	Black box	3

	endList can send message to the user and the user will get it.	messages sent from unapproved friends	messages sent from unapproved friends.	friends to send messages		
74	The messages is not displayed chronologically	The messages is displayed according to the friend list	The messages should be displayed chronologically	Update the way the messages is listed	Black box	3
75	Adding a friend with null name will cause the system to crash	Null name friend is allowed to add and it will cause the application to crash	Null name friend should not be allowed to be added	Check the null name exception block on the contact class	Black Box	1
76	The getItemId is never used in any module and it simply returns 0 without any other functionality	the user would not be able to read friends information at all	The user should be able to access to the friend information when clicking the friend profile button	Change the return value of the getItemId function to the friend position counter	Black Box	3
77	ConvertView is reinflated whether it is	ConvertView is reinflated	ConvertView shouldn't	We can reuse it directly,	White Box	3

	null or not	whether it is null or not	be reinflated when it is null	there is no need to reinflate it. We only inflate a new View when the convertView supplied by ListView is null.		
78	Unhandled Exception when the user submits an empty username or password when	The user should be able to log in with a empty user name or password	The user should not be able to log in with a empty user name or password	Change the password and username word count in the login class	Black box	2
79	While getting messages, it does not return the first message.	The first one in the message list is not returned.	Every message in the message list is returned.	While getting messages, it starts from index 0 instead of 1.	Black box.	1
80	The user cannot change his username in profile	The user has no permissio n to change his profile	The user should be able to change his informatio n in profile.	Add functions to change user profile	Black box	3
81	When a user tries to add a	The user can only	The user should be	When two users try to	Black box	3

	friend and the friend tries to add the user at the same time, they cannot add each other	add a friend by add him and let him accept	able to add a friend by adding each other	add each other, the server automatically make them friends		
82	When the user want to change his password, no re-enter password is asked.	The user will just enter password once when they want to change his password	The user should be asked to enter the password twice.	Add a text box and let the user enter the password again	Black box	3
83	When the user try to add a friend using username, he could add a wrong person because username is not necessarily unique.	The user may add a wrong friend with username	The user should add a friend with id	Allow the user to add a friend only by id	Black box	2
84	The user is not able to clear old messages that he does not need any more	The user is not abl eto clear old messages	The user should be able to clear old message s	Add a function to clear old messages	Black box	3
85	In MessageContr oller.java	In the method "checkMe	This unused parameter	Eliminate this "username"	white box	3

	class, the method "checkMessage" has an unnecessary parameter "username".	ssage", a "username" string was passed as parameter, but was never used in the method.	is not needed.	parameter so that the code looks neater.		
86	In MessageController.java class, the method "getMessageInfo" has an unnecessary parameter "username"	In the method "checkMessage", a "username" string was passed as parameter, but was never used in the method.	This unused parameter is not need.	Eliminate this "username" parameter so that the code looks neater.	white box	3
87	Iterator of the for loop in method "checkMessage" didn't increment.	In the method "checkMessage", the for loop iterator was never incremented.	Since the iterator was never used, we don't need the for loop.	Eliminate the for loop to enhance integrity of the code.	white box	3
88	Iterator of the	In the	Since the	Eliminate	white box	3

	for loop in method "getMessageInfo" didn't increment.	method "getMessageInfo", the for loop iterator never got incremented.	iterator was never used, we don't need the for loop.	the for loop to enhance integrity of the code.		
89	In the class "FriendController.java", class variable activeFriend of string type wasn't initialized.	All other class variables got initialized to null except for "activeFriend".	It is better to initialized the class variable to null.	Initialize the class variable "activeFriend" to null.	white box.	3
90	If the user register with an email address from hotmail, he or she can also login with gmail, provided that the same username prefix and password were entered.	Different domain name can grant access given the same username prefix and password.	Different domain of email address shouldn't grant the user access.	Check the server so that we can also parse the domain name.	Black box	1
91	Another user register with the same username, the	An existing user informatio	We cannot have another	We shall check the compare the username	Black Box	2

	information of the previous user name was overwritten.	n could be lost because of the same informatio n entered by another user.	user that overwrite another user's informatio n.	with all the username in the database in the instance of registration		
92	If one user had login, another user was able to login without logging out the previous user.	The previous user should be logged out before another user start to login.	Force the user to logout before he or she login with another account.	We are going to add a procedure so that it constantly check if another user wants to login and replace the current user.	black box.	2
93	When a user logout, the button sometimes needs to click twice.	The user need click logout button twice before exit	The user should only click once when trying to log out	Delete the click count in the logout page	White Box	2
94	When checking unapproved friend list, the condition doesn't include checking the length of	User didn't select anything to unapprove d friend list but the sendFrien dReqRes	Null unapprov ed friend list should never be responde d.	add approvedFri endNames.l ength() > 0 to the condtions before response to friend	Black Box	2

	approvedFriendNames	ponse still response to a null request		request		
95	When the client's system time is wrong, the thread will crash	the server thread crash	when the system time is correct, sign in successfully	modify the database part setting	black box	3
96	When signing up a new user, if the password is the same with the previous user's, the old one will be delete	the old user will be deleted	When the email is new, sign up correctly	modify the database part setting	black box	2
97	When signing up a new user, if the e-mail is the same with the previous user's, the old one will be delete	the old user will be deleted	When the email is new, sign up correctly	modify the database part setting	black box	2
98	When sign up the name exist, the old one will be replace by the new one	The old user will be deleted	When the username does not exist, sign up correctly	in the server part, when signing up a new user, the server has to check	Black box	1

				whether the username existed		
99	Client friend list online&offline status show incorrectly	Friend online status is opposite	Friend online status should be shown correctly	Compare authentication time to 60s, and set online status accrodingly	Black box	2
100	Once client reads the message, server does not update the read status of the message	The user will never know whether the message is read or not	The user should be able to know whether the message is read or not	Once the message is loaded, update the read status on server.	Black Box	3