

## **Design Inspection/Code Review #2**

Team Packat.tk

Product	Java Server Design Inspection
Date	03/05/2015
Author	Xiaoqing Ji
Inspectors	Cris Shumate, Evan Arnold, Matthew Tracy, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Server doesn't respond to requests from Android front-end or Website	1	Return "Success" and "Failure" message. If the server doesn't respond for a long time, send failure message to let front-end resubmit the request
2	Server mistakenly allows to create new user account with registered purdue ID number	2	Let database get all ID numbers and make comparison before inserting new account. Return failure if ID has existed
3	Server cannot show the package details of the new user	3	Retrieve packages that belongs to the new user and update package information in the user account

Product	Database Wrappers Design Inspection
Date	03/05/2015
Author	Evan Arnold
Inspectors	Cris Shumate, Matthew Tracy, Xiaoqing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Package times aren't added correctly	3	Time is stored as a long, so store as a System.currentTimeMillis()
2	If there are no table entries, the lookup fails	1	Add a check to make sure that the table selection is not null before reading it
3	SQL can't store booleans, so getting/setting them in the table fails	2	Store the value as an integer. When retrieving the int, convert to boolean.
4	Retrieving packages for a given user fails	1	Query the packages table directly based on the user ID rather than retrieving package IDs from the Person entry

Product	Web Interface Design Inspection
Date	03/05/2015
Author	Alex Hamlin
Inspectors	Cris Shumate, Matthew Tracy, Xiaojing Ji, Evan Arnold

Defect #	Description	Severity	How Corrected
1	Package entry screen cannot show a list of users in the system	1	Create a method to retrieve all users and return a list that can be bound to the user table in the entry screen
2	Package detail display on view screen does not show timestamps	3	Generate a formatted date string from the package timestamp and display it
3	Packages do not receive proper timestamps when scanned	2	Ensure that the value of System.currentTimeMillis() is

			used when packages are scanned
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## **Code Inspection**

Product	Database wrappers
Date	03/05/2015
Author	Evan Arnold
Inspectors	Cris Shumate, Matthew Tracy, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Users cannot be retrieved by a username (when logging in)	2	Add a function to get a user by their username
2	All exceptions are caught by default in each function and no errors are printed	3	Only catch SQLException and print a stack trace

Product	Java Server Code Inspection
Date	03/05/2015
Author	Xiaojing Ji
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Server doesn't correctly split the messages sent from the client	1	Split the messages into certain amount of pieces. Return failure if the front

			end sends wrong format messages
2	When a server adds a new user, Some package information like package amount is needed by the database, but it cannot be made by users	3	Always set the default values (like 0 for package amount if no package is found for the user) for missing given values
3	Server accepts unverified administrator requests to show packages from all users	2	Verify the administrator ID with the one stored in the database before listing all package information
4	Server tries to remove a package with an invalid given tracking number	2	Ensure the package with this tracking number exists before remove it from the database

Product	Web Interface Code Inspection
Date	03/05/2015
Author	Alex Hamlin
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Matthew Tracy

Defect #	Description	Severity	How Corrected
1	Tracking numbers can be changed when editing package details on the scan screen	3	Ensure that the tracking number field is disabled
2	Non-administrators can access the package entry screen	1	Ensure that isAdmin is true for the current user before allowing access to this page

## Unit Testing

Product	Database Wrappers Unit Testing Inspection
Date	03/05/2015
Author	Evan Arnold
Inspectors	Cris Shumate, Matthew Tracy, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
1	Retrieving package/person from empty database or incorrect information	2	Add conditional to check if search query is empty or not.
2	SQL injections possible	1	Use prepared statements to prevent injection
3	Function parameters may be null or uninitialized	2	Check if the parameters are not null
4	Package insertion fails due to SQL syntax error	1	Fix SQL syntax for adding packages (correct parentheses and add new time parameter)

Product	Java Server Unit Testing
Date	03/05/2015
Author	Xiaojing Ji
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Alex Hamlin

Defect #	Description	Severity	How Corrected
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1	Server cannot finish writing a long message to the client side in a really short period of time	2	Client leaves longer response time for the Server to write messages if its requests ask to list packages or user information
2	The modifications made on Android/ Web may not be updated correctly on the other kind of front-end	1	Ensure Android and Web can equally use all function provided by the server. None of the functions are dependent on the front-end type
3	Server may display inaccurate package details to the user	2	Call functions to check updates before collecting all information from packages

Product	Web Interface Unit Testing
Date	03/05/2015
Author	Alex Hamlin
Inspectors	Cris Shumate, Evan Arnold, Xiaojing Ji, Matthew Tracy

Defect #	Description	Severity	How Corrected
1	Package entry and viewing pages can be accessed without logging in	1	Store user information in a session and redirect to login page if null
2	Attempts to get the user in the current session lead to NullPointerExceptions and prevent the page from loading	1	Use VaadinService to get a wrapped session on which variables can be properly stored and retrieved
3	Package entry page reports success even when packages fail to be inserted	2	Check return value of addPackage on each insert operation
4	Table column headers are not properly set, possibly causing	1	Set visible columns and headers <i>after</i> binding the

	exceptions and preventing the viewing page from loading		package table to the internal container
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