Mickey Mouse's Laundry House

Technical and Testing Document

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Externally Sourced Code

In order to make it possible to use a spinner in a table so that users can tally up the items in their laundry bag, I had to externally source the code to do so. This code was taken from the following url:

http://www.java2s.com/Code/Java/Swing-JFC/UsingaListJSpinnerasaCellEditorinaJTableComponent.htm

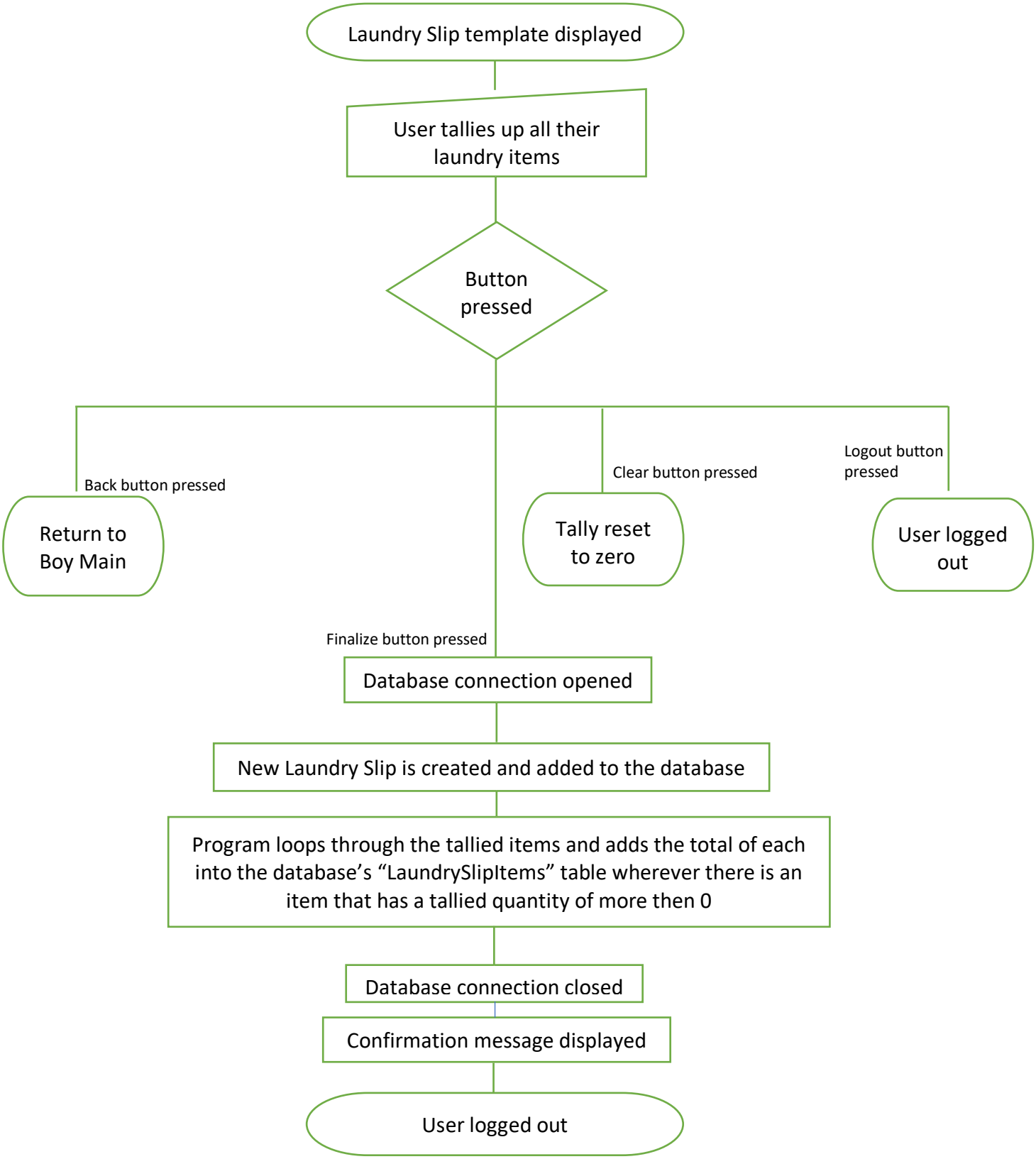
Help was also obtained from:

https://o7planning.org/en/11185/javafx-spinner-tutorial

Please note that the graphics used were not taken off the internet but rather made, by myself, in Adobe Illustrator in order to make all buttons look similar.

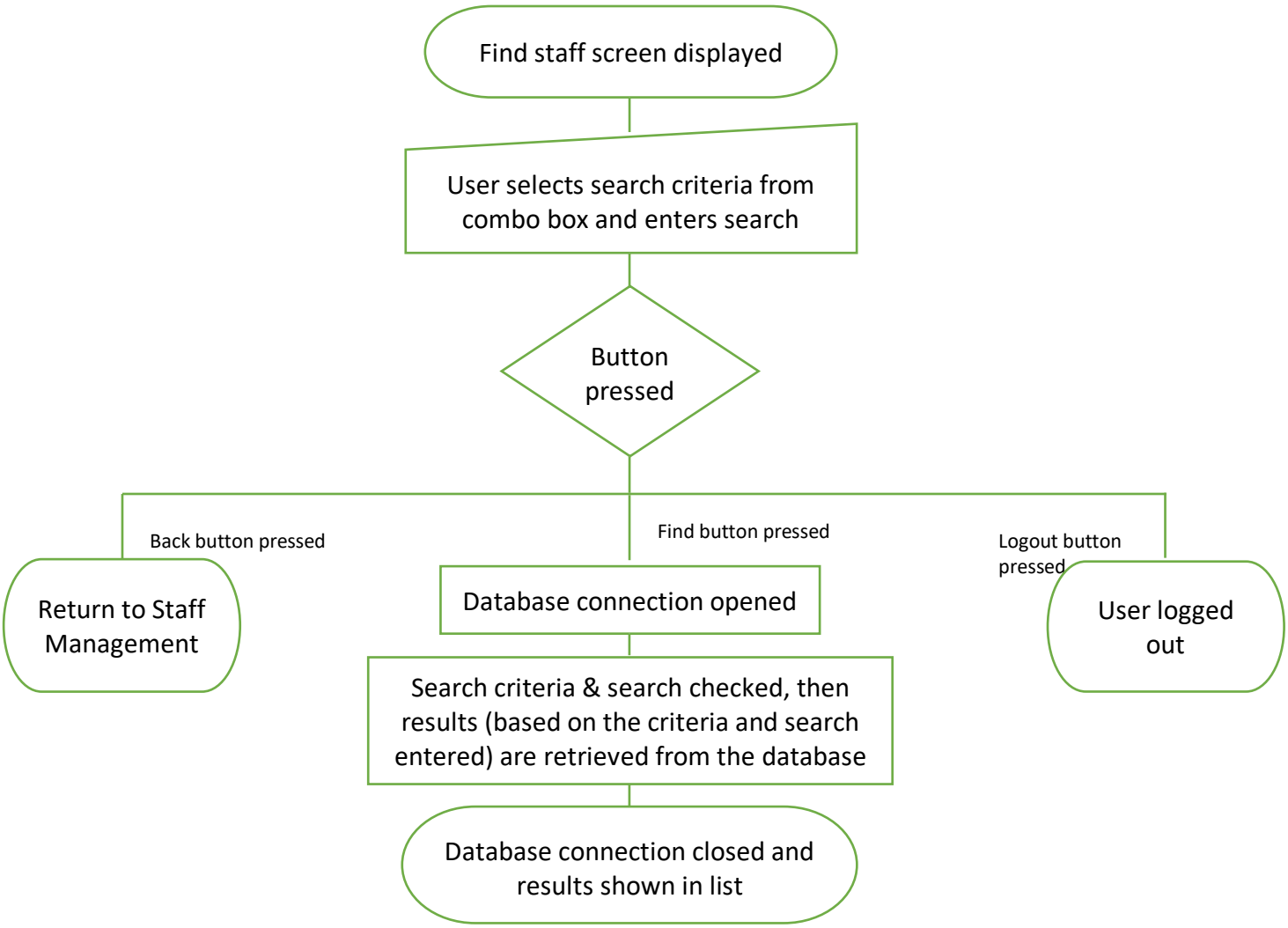
Explanation of Critical Algorithms

Adding a new laundry slip to the database



The reason this algorithm is so essential is because creating a virtual laundry slip is exactly what the entire program revolves around and would thus be useless without this functionality. The rest of the program, creating users, managing users, recording stats, updating the laundry slips, removing them, allocation of staff to them, etc, all require that the digital laundry slip be there in the first place. The rest of the programs functions are more so to edit, track and view these slips as well as members associated with them and thus this algorithm is extremely crucial in the operation of the entire system.

Finding staff members



This algorithm is important in order to get the details of a staff member when management needs to contact them due to an error

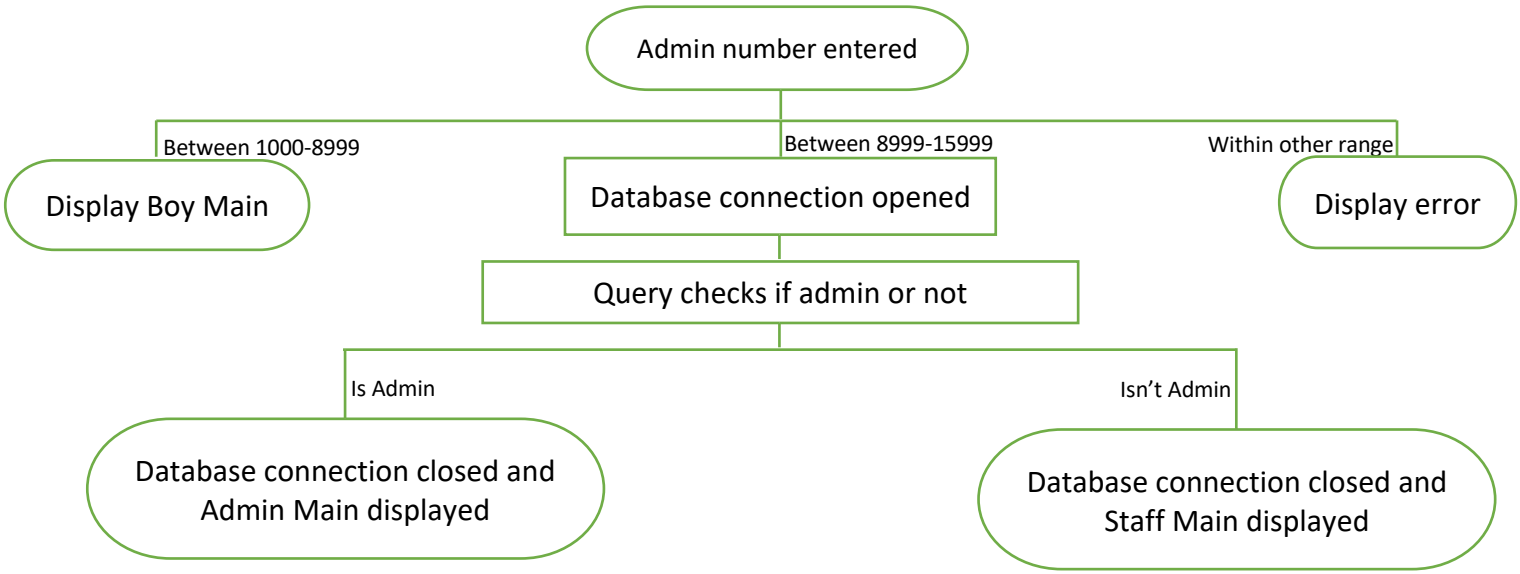
with a laundry slip – or just for a general query. Without it, it would be very hard to try figure out who the actual staff admin numbers refer to.

Advanced Techniques

Logging in as a user

For my program I have 3 different user types, however, I really wanted to try hide this from the user and instead make the program display the same login for all users but just determine which screen to send the user to, based on who it is.

As well as knowing where to direct a user, my login algorithm also accounted for some important error checks. By knowing which range is allocated to which user type (boy's are between 1000 and 8999 and staff and admin's between 8999 and 15999) I knew whether or not the user was a boy/staff member. I then used a database query to check if they were an admin or not (if the user was a staff member) and display the correct landing page to the user.



z

Querying the database to get the total laundry slips for each house

In order to get the total laundry slips for each house, a complicated SQL query had to written in order to work this out. It required using a left join as well as a nested query so as to be able to get the totals for each house.

The SQL query is as follows:

```
SELECT house, (select count(*) from laundryslip, boys where
laundryslip.boy_admin_num = boys.admin_num && boys.house = ?)
as 'total'
FROM boys LEFT JOIN laundryslip
on laundryslip.boy_admin_num = boys.admin_num
group by house
having house = ?
```

****the ? represent where the house name would be inserted*

The program used this query by looping through an array of house names, switching it in each time and then storing the "total" column value each time into an array that stored the house totals.

Test Plan and Results

In order to test my program, I attempted to enter normal, extreme and erroneous data in every input of every screen that has an input field.

I used the following key to represent the results of my tests:

	Program runs normally with no crash or error message
	Error detected, and program reacted accordingly
	Program didn't detect error but instead crashed

Login Screen

Field	Normal	Extreme	Erroneous
Admin number	5558	349358	Da boss
Password	MyPassword	Incorrectpassword	*blank*

New Laundry Slip Screen

Field	Normal	Extreme	Erroneous
Item Quantity	3	999	Lots of clothes

Find Slip Screen (boys)

Field	Normal	Extreme	Erroneous
Slip ID	25	-2	////?!

Find Slip Screen (staff)

Field	Normal	Extreme	Erroneous
Search by – combo box	For this one, I used the same combo box value “Block” and then adjusted the search data		
Searcg	A	Z	5558

Confirm Items Screen

Field	Normal	Extreme	Erroneous
Item Quantity	3	999	Lots of clothes

Initiate New Slip Screen

Field	Normal	Extreme	Erroneous
Slip ID	25	-2	///?!

Update Slip Screen

Field	Normal	Extreme	Erroneous
Slip ID	25	-2	///?!

Add new Staff Member Screen

Field	Normal	Extreme	Erroneous
First name	Liz	Abu-Genia-sieka Praise God Mchunu	. [1]
Surname	Wanye	*Blank*	?[1]
Admin Number	10002	1242352345	My admin number
Email	elizabeth@michaelhouse.org	@@@@michaelhouse.org[2]	Die hond blaf
Password	MyPassword	Sdflghhdfshgdfshgf/;	*blank*
Admin	No	No	No

[1]Unfortunately, my program fails to detect when someone has not entered a real name (for example entering a full stop or question mark) – it does however detect if someone enters in nothing. It is because of this inability to detect a real name that the erroneous data was treated normally and created a user with the name "."
[2]Sadly it also could not detect an email that contains a double "@" sign

Update Staff Member screen

**Same as above

Find Staff Member screen

Field	Normal	Extreme	Erroneous
Search by – combo box	For this one, I used the same combo box value "Surname" and then adjusted the search data		
Search	Feaver	*Blank*	#2

Add New Boy screen

Field	Normal	Extreme	Erroneous
First name	Liz	Abu-Genia-sieka Praise God Mchunu	. [1]
Surname	Wanye	*Blank*	?[1]
Admin Number	10002	1242352345	My admin number
Email	elizabeth@michaelhouse.org	@@@@michaelhouse.org[2]	Die hond blaf
Password	MyPassword	Sdflghhdfshgdfshgf/;	*blank*
House	Farfield	Farfield	Farfield
Block	A	A	A

[1]Unfortunately, my program fails to detect when someone has not entered a real name (for example entering a full stop or question mark) – it does however detect if someone enters in nothing. It is because of this inability to detect a real name that the erroneous data was treated normally and created a user with the name "."
[2]Sadly it also could not detect an email that contains a double "@" sign

Update Boy Screen

***Same as above

Find Boy Screen

Field	Normal	Extreme	Erroneous
Search by – combo box	For this one, I used the same combo box value "Admin num" and then adjusted the search data		
Search	5558	*55.58*	#My Huisie

I think it is fair to say that my program has implemented effective error checking and is of a high enough standard to be fully operation in most circumstances.