SWAPAHOLIC – A Creative Take in Reducing Textile Pollution

Komal Sadrani, Samruddhi Sonak, Avinash J. Agrawal

Abstract*: Textile industries are the second most contributing aspect that leads to the global pollution of the world. The pollution that is caused by the textiles can be broken down into the following parameters: Water Pollution - Textile industry is a voracious consumer of water. Various processes of the textile/cloth manufacturing require water which includes scouring, dyeing, sizing, bleaching, printing and other finishing processes which are known to the humankind. Air Pollution - Textiles move through the production processes. Harmful gasses like nitrous oxides, Sulphur, etc. is emitted in the air through chimneys by bleaching and printing processes. Solid Land Pollution - Fibers, hemp, yarns, and other production wastes are also contributing factors to solid Pollution. Extra powdered colors and color holders, scrap metal, oil fabrics, and wastewater slime can sully the dirt and groundwater sources if not legitimately discarded or discharged untreated. As an effort to counter this pollution to an extent possible for an NGO named "One with Earth" from Singapore came up with a concept of Swap-ping already produced clothes to help the reduction of new garments manufacturing. Swapaholic stands for swapping clothes amongst citizens to encounter the problem faced by nature and help in reducing waste as much as possible. The following coming features will describe the Swapaholic internal process.

***Index Terms*: Go Swapaholic, NGO, Reduce pollution, Swapping.**

I. INTRODUCTION

Environment safety is very imperative with the aspects of the growing pollution resulting in the significant occurring factors as global warming. To help and sustain, a team of creative individuals have come up with Swapaholic which is an NGO backed up by One With Earth Foundation. Swapaholic is a platform wherein customers can swap (not buy) clothes/items which are available to be exchanged like accessories, bags, etc. based on the points that they earn from the clothes they submit.The swapaholic team has an internal process structure build up that enables them to calculate the points for every item that they receive from the customers by various factors related to the clothes they receive.They held events for which registrations are held up online for anyone and everyone to register in Singapore wherein customers can come and swap clothes in exchange of the points they earned for the clothes/items which they submitted after registering for the event. Various parameters are needed to organize such a significant global event, which will be described in detail furthermore.

II. PROPOSED WORK

To support all the various activities that will be taken up by the Swapaholic team in the path that they had selected they needed extensive technology help since maintaining the records or controlling the traffic at the events they will host will need systems that can hold their records and Swap team can work on their goalFor the internal team Desktop systems were going to be set up for them to finish the work, but due to a limitation of the agility of the Desktops, the team came up with the idea of a mobile application to help the in-house system team. But since the same thing can be done using mobile, we had implemented a useful mobile app for it by saving the cost of purchasing and handling desktop. Every-thing is executed making use of ionic framework which is known popularly for building mobile apps..Complete app is maintained using the Git repository system. As such till now there are no such systems which are working as an NGO and contributing to the reduction of water wastage and landfills in such a technical way. Till date, the author has completed 22 swap events in total from December 2015. It is a type of e-commerce which implements two models of e-commerce — customer to customers (C2C) model and mobile commerce model. C2C model involves the process of the quality check which usual C2C model does not have.How is this system saving the planet by swapping? The fact is that most of us use only about 30% of our closet's components. The 70% we don't utilize, are stored purposelessly with the possible destiny of winding up in a landfill even. Thus 4.95% out of 5% of landfills are textile emitting greenhouse gases that can be swapped. Below is SS of frontend directory system on atom editor.

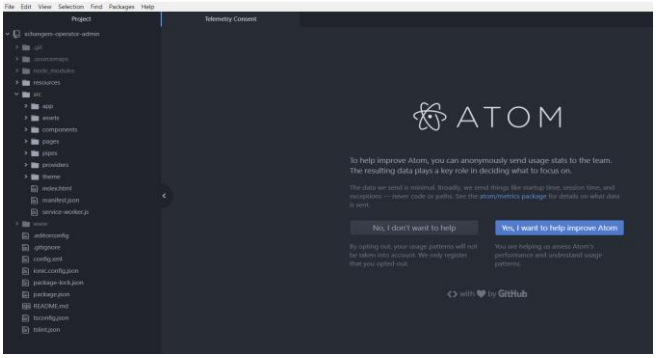

Fig. 1. Project folder structure generated using ionic.

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Creator speaks "In Singapore alone, we toss around 150,000 tons of fabric and material waste every year (approximately 120 shirts for each); of which 90% could have been reused somehow or another or structure.

Second, 200 tons of fresh water are utilized to Color 1 tone of fabric. Consequently, "Swapping gives us an alternative to put a conclusion to these hurtful practices and have some good times while doing it. Swapaholic's point is to be manageable every which way. Their methods of insights, their approach, operational systems are altogether customized around the primary standard of zero waste.

III. IMPLEMENTATION

Initial Event flow can be explained as follows:

1. The Customer goes on the Store Portal, buys a subscription and schedules a pickup.
2. During the pickup being schedule, the Origin of the items will be marked as online since these items are going to be delivered at Swapaholic Warehouse from Store Portal
3. The items Origin Status will be used later on to segregate them during the Inventory Storage
4. Once the Pickup has been scheduled, they will follow the route through the Operator Admin (OA) wherein the OA will enter the items into the system. Customers will approve those items after which they will be given to the Inventory Manager to store in the Inventory
5. The Inventory Manager will scan the item, and by the origin, the Invento-ry Manager will be able to view the aisles, stacks, and shelves. If the Origin of the Item is Store only then the item will be shown the lo-cation options of Store Inventory.

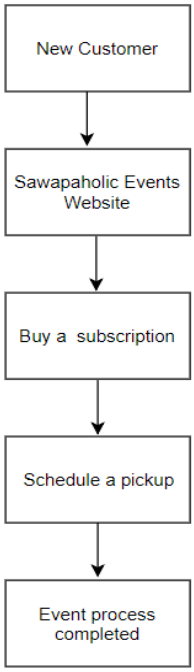

Fig. 2. Basic Event flow diagram

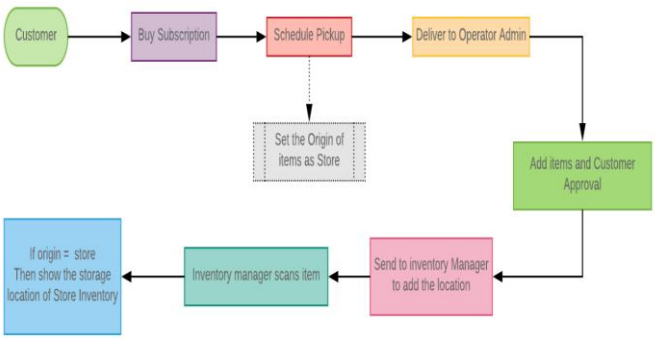

Fig. 3. Detail Event flow diagram

The Detailed Roles of the Operator admin app is as follows

1. Operator Admin
2. Inventory manager
3. Photography app

A. Process Workflow on Operator Admin:

The Operator Admin Role is Adding Items into the System against the respective Customers Pickup Cards and Relocating the items which have been approved by the Customer.

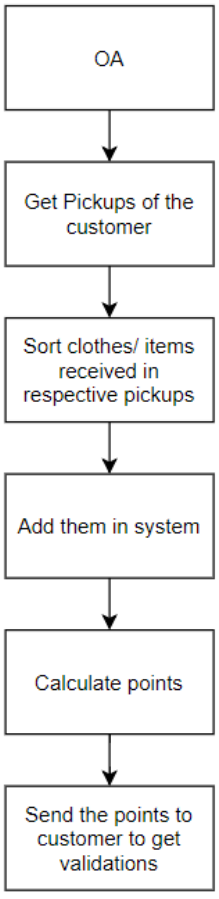

Fig. 4. Process flow diagram of Operator Admin.

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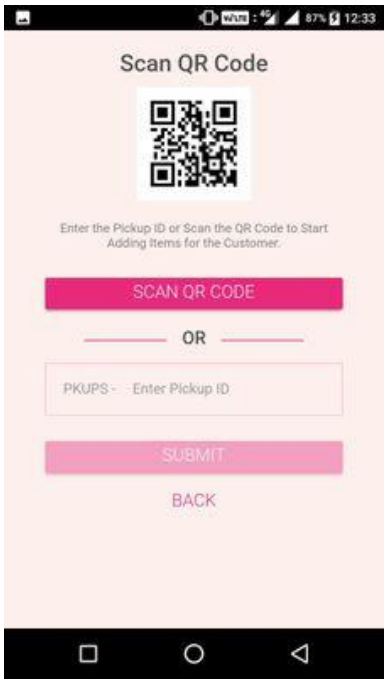
The Operator Admin will log in with the Credentials shared with them and will view a screen given below:

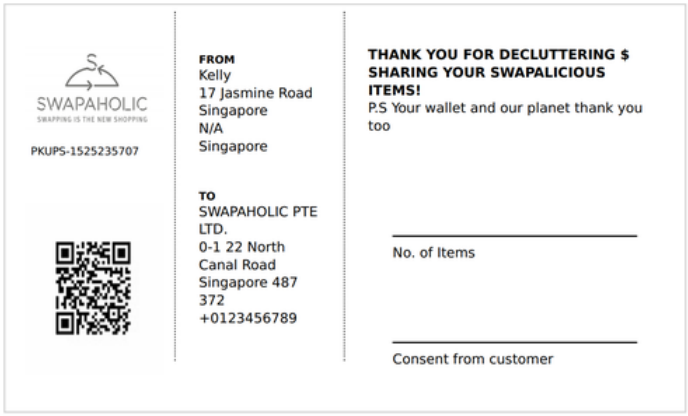
Quality Check Process

1. The Quality Check Process is an essential process since all the items de-tails will be added, and the equivalent points will be calculated and sent.

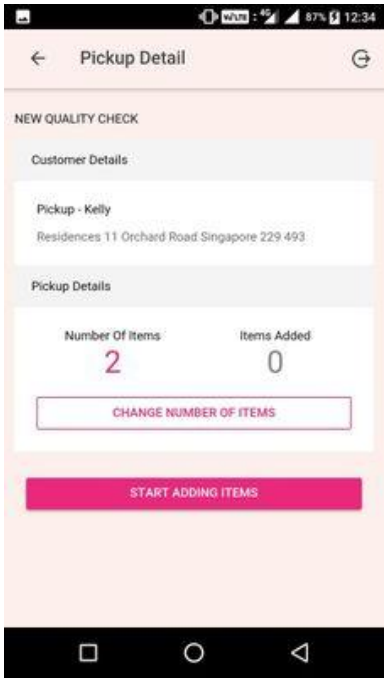
2. On click of the Quality process, you will be able to see the below-attached Image



3. You need to Scan the Pickup Cards QR or enter the code that you will be able to find on the Pickup Card as given below.



4. Once you Scan you will see the Pickups Detail View on which only on the first time scan you will be able to Change the Number of Items that you receive for the respective Pickup if needed



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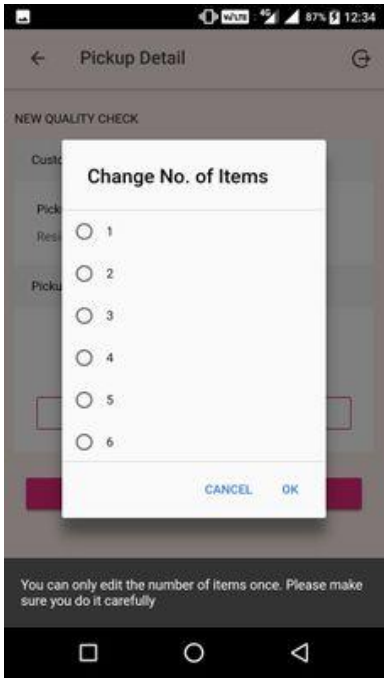
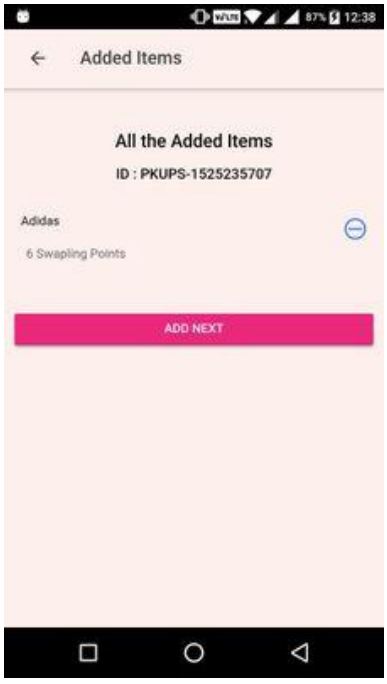


5. Now you will be able to see the additional items view labeled as 'Add Items,' wherein you can add the details of the item.

6. Once all the items have been added, you will be able to see the general gist of all the items added, their Swapping points, if Item has been Marked up or Markdown.

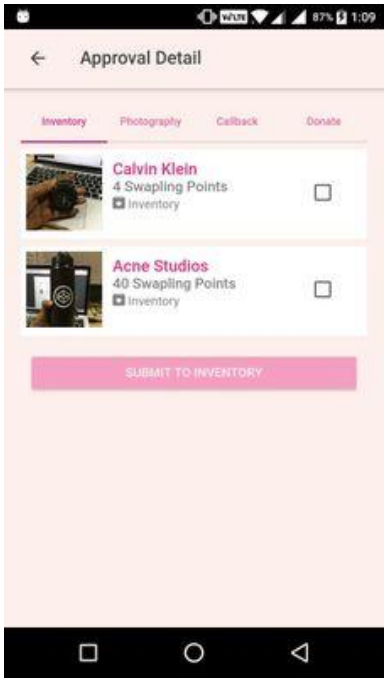


On click of Add Next, the mail will be sent to the Customer about the details of all the items the Customer has given to Swapaholic and the Total Swapling Points.

Approvals Process

The Approvals Process will be the one wherein the Operator Admin will be re-sponsible for segregating all the items according to their statuses after they have received the Approvals on Pickups by the operator admin.

The Operator Admin will see the List of Pickups on Click of the Approvals and can filter and search through them. For reference, it is given below



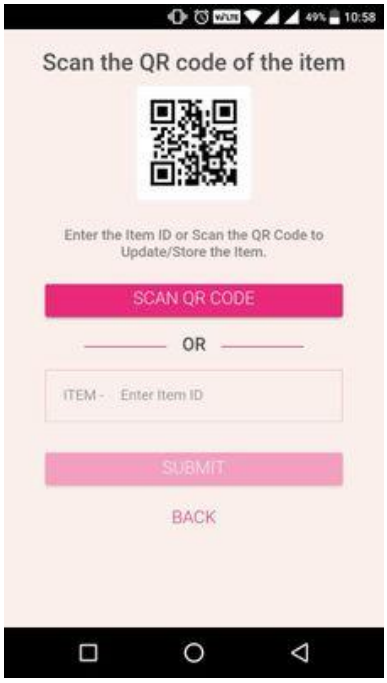
Those can then be submitted to Inventory for further process.

B. Process Workflow on Inventory Manager Store to Inventory

The Inventory Managers Role is Adding the location of the Items stored in the warehouse, into the System and Relocating and retrieving those items whenever necessary. The Inventory Manager will log in with the Credentials shared with them and will view a screen given below

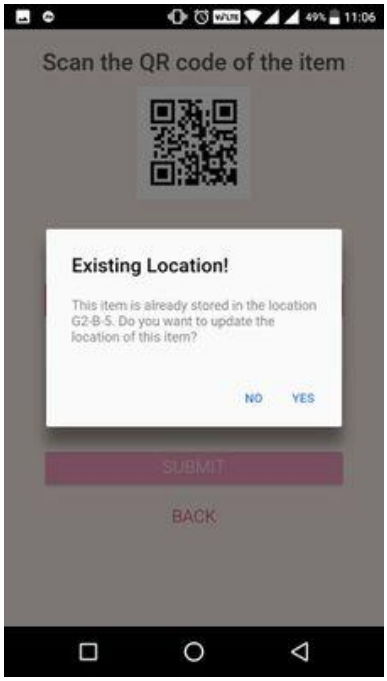
Workflow

1. The Inventory Manager will have a list of items which need to be added to the Warehouse, i.e., Store their location in Inventory.
2. To implement this process, the Inventory Manager needs to Scan the tag/card which will be attached to every item by then by the Operator Admin Itself.



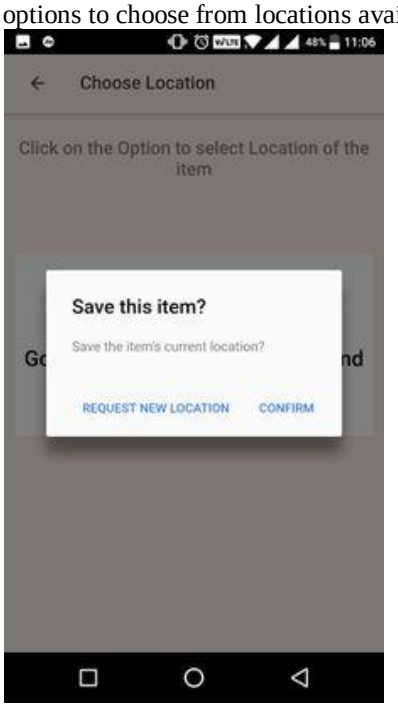
3. Once the Items Card is Scanned if the Location of the item is not previously set then the Inventory Manager will be given the best possible option to choose from.

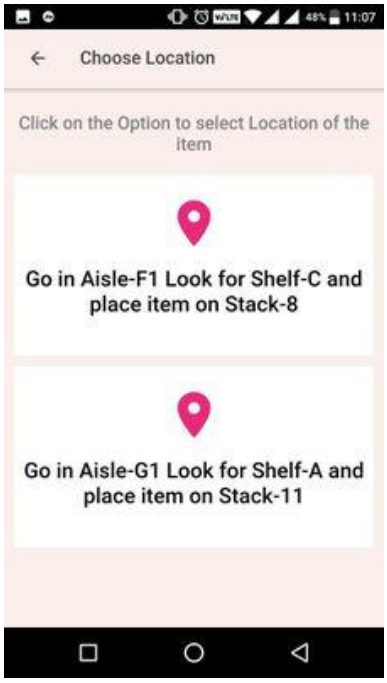
4. If the Item already has a location set, it will ask if the location needs to be updated



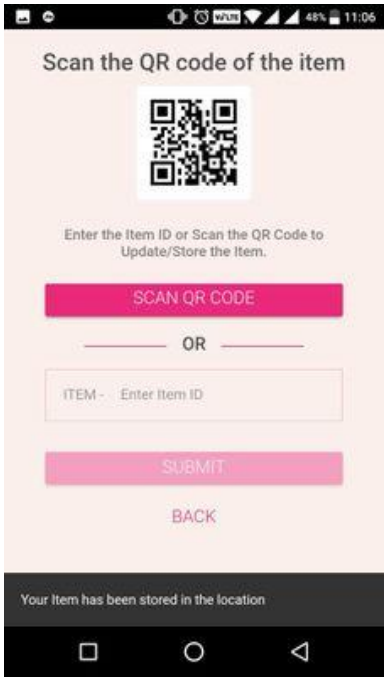
5. Once selected you will be redirected to the view with the Location Option Available, if you need to change the location, you can request a new location if it is available in the system.

6. If it is available in the system, the Inventory Manager will be given options to choose from locations available



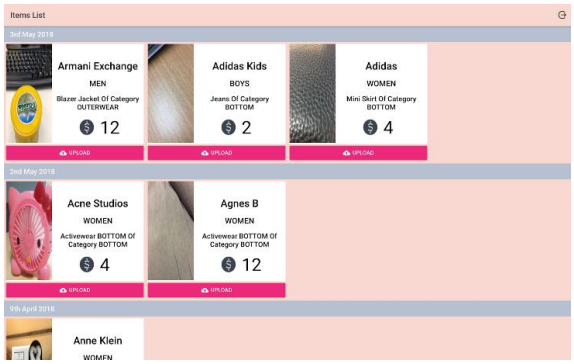


7. Once selected please confirm, and your location for that item is stored

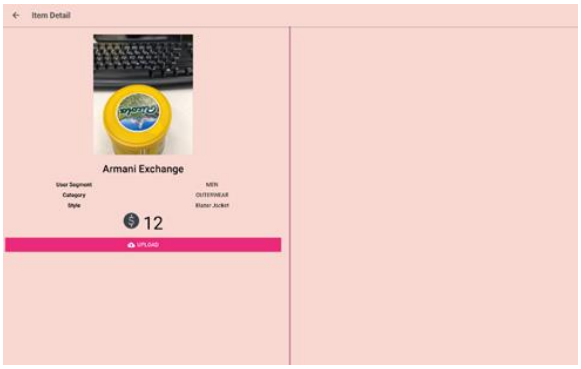


C. Process Workflow of Photography Browser App

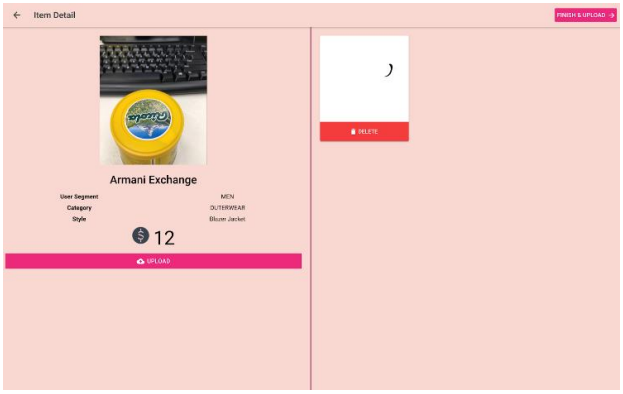
The Photographers Role is Adding Images into the System against the respective items for whom the photoshoot has been completed. Once logged, in the list of the items can be viewed according to the date Operator Admin have added them



You can upload images for the item from the above view. Also, you can go to the detail and upload the same



Once all the photoshoot images for the items are added, please click save/finish and upload button which will be viewed in the header after images are uploaded.



IV. CONCLUSION

Sustainability in the fashion industry if tried can be extremely difficult to achieve, but an extreme effort is being put up. Renting out fashion items is the new way to reduce the pollution caused by the textile industry, in achieving these new technological aspects we worked upon to make this possible.

The new mo-bile application was built to sustain the agility as well as restore the data that needed to be saved. Since saving the environment is a major priority, drastic steps have been taken up to change the psychology of the minds of people. Tak-ing one industry into account, the viable aspect to reduce waste and pollution, Swapaholic has come into existence.

FUTURE SCOPE

The Swapaholic will have an online e-commerce website soon expectedly by around July 2019, wherein the customer who swaps items based on their points will now be able to do from anywhere and everywhere sitting at their home and comfortable environment in exchange for the points they have.

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