

Milestone 3 Submission

Team Name:

Shopkeepers.

Proposed Level of Achievement:

Project Gemini

Motivation

Ever been surprised to see a parcel delivered to your doorstep when you **do not remember purchasing anything online** recently? Otherwise, have you ever been quite sure that you have purchased something recently but **cannot recall** what it is or **where** you bought that particular product from? It has come to our attention that many people have found it **inconvenient** to have to manually keep track of their online purchases, especially when they have bought many things online.

With the advancement of technology, **e-commerce** is growing at an unprecedented rate and has been reshaping the retail landscape in all parts of the world. More and more **online retail platforms** have been emerging (eg Taobao and Shopee) and many retail stores also offer online purchases as well. As each platform only keeps track of purchases from **their own stores**, many shoppers might be **too lazy** to check each application/website one by one to track their online purchases.

As such, we decided to come up with a **website tracker**. With this tracker, one simply has to input the website/application and product they purchased and **remind shoppers** about the existence of the parcels. The tracker will also be able to show the **estimated delivery time**. We decided to implement the tracker as a website as it is **easily accessible**, have a **wider reach**, better **compatibility** and is definitely **cheaper** to construct.

Aim

We hope to provide a **webpage called the Shopkeepers** where users can keep track of their individual online purchases. Our target audience is **online shoppers**. The problem that many online shoppers face is that there is a **lack of an individualized tracking system** for online purchases. There are instances when people tend to forget what they bought online, and whether or not they have been delivered. Hence, the main need that we hope to fulfil is to allow online shoppers to be able to keep track of everything purchased online. We also want the web page to be **user friendly** so that it can be easily managed by all.

User Stories

1. As someone who **forgets things easily**, I want to have something that can help me keep track of the items I bought online.
2. As someone who **shops online frequently**, I want to be able to keep a record of my purchase history in case I intend to repurchase an item, but forgot where I bought it from.
3. As someone who **buys essential things online** sometimes, I want to be able to remember and keep track of the estimated delivery time of my parcels.
4. As someone who is **away from home most of the time**, I need to keep track of my parcels' delivery dates so that I can arrange for pick-ups in case I am not at home on the day of delivery.


Features and Timeline

Key Features:

1. User Account [DONE BY MILESTONE 2]

- a. Creating user account
- b. Username, email and password **validation**
 - Password must be at least 6 characters
 - Password and Confirm Password must match
- c. Login
- d. Logout
- e. Resetting of password

Log In Page




Please fill in your credentials to login.

Username

Password

Don't have an account? [Sign up now.](#)

Sign Up Page



Please fill this form to create an account.

Username


Email

Password

Confirm Password

Already have an account? [Login here.](#)

Reset Password



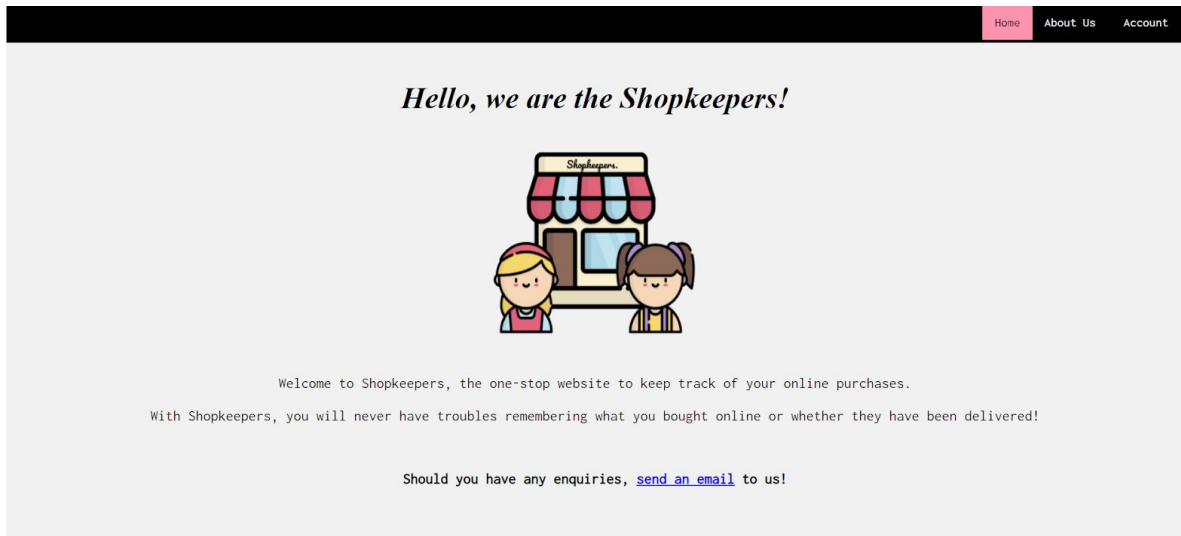
Please fill out this form to reset your password.

New Password

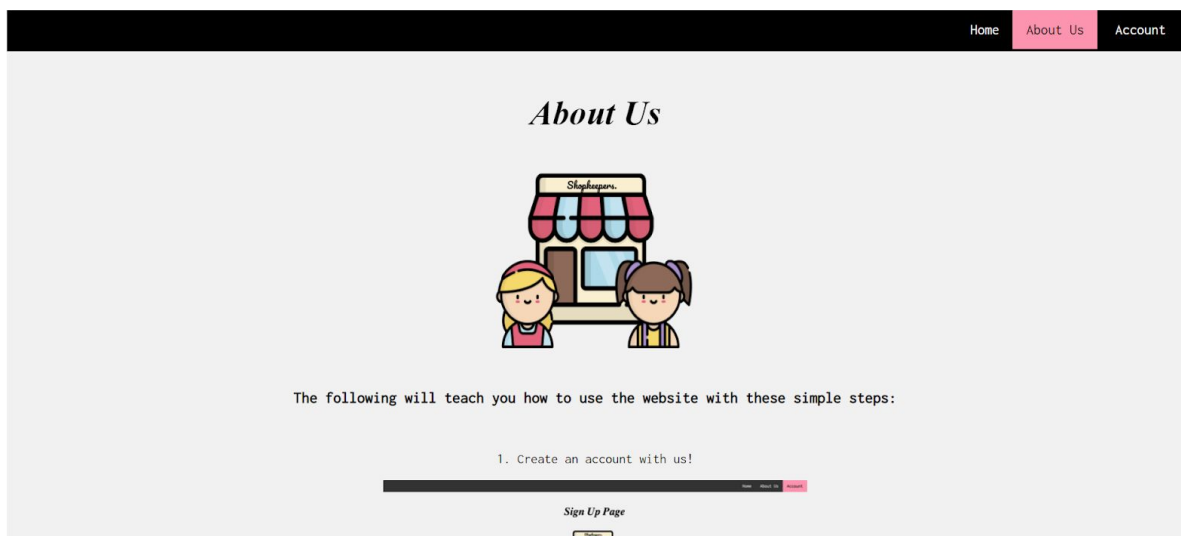
Confirm Password

2. Home and About Us Tabs [DONE BY MILESTONE 3]

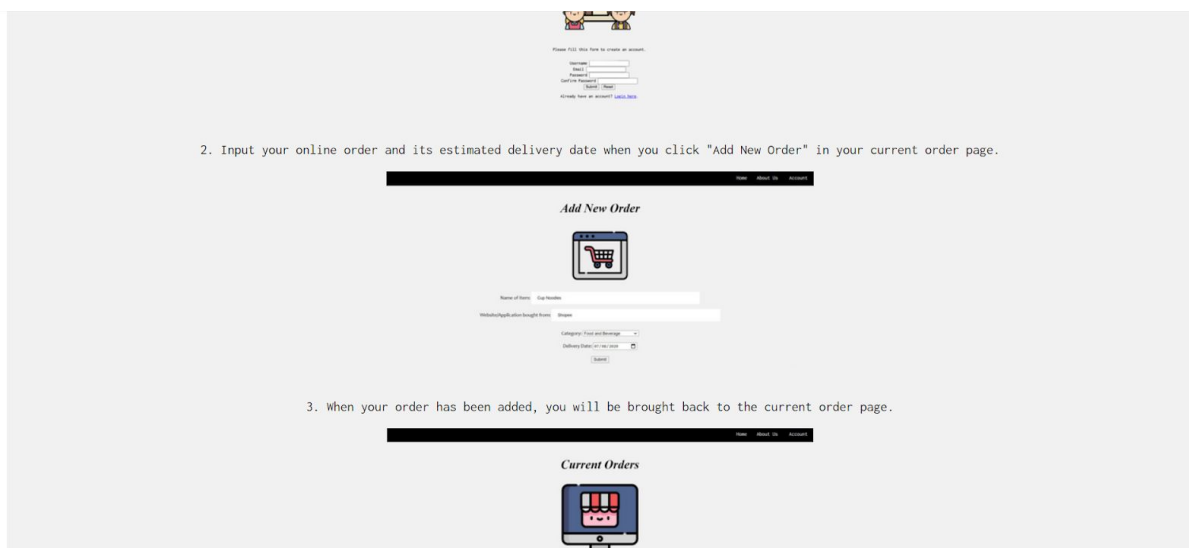
- Provide a **brief introduction and overview** of the purpose of the website.
- In the About Us tab, an **illustrated step by step guideline** with screenshots is provided to teach the users on how to use the features of the website.



Home Tab



About Us Tab




Part of the step by step guide in About Us Tab

3. Current and Past Orders Tabs [DONE BY MILESTONE 2]

- Reflects user's current and past orders in the form of a table, **arranged according to the delivery dates of the items.**
- Orders that have been delivered will be added into the past orders list once the delivery status have been updated, with **all information about the order still being retained.**
- If there are no current or past orders currently, a **"No Current Orders" / "No Past Orders" message** is shown.
- **Link at top left** hand corner that **redirects** users back to the Current Orders/Past Orders tab respectively.

[View Past Orders](#)HomeAbout UsAccount

Current Orders



[Add new order!](#)

New order added successfully.


Name of Item	Website/Application	Category	Delivery Date	Delivered?
Dress	Taobao	Clothings	2020-07-31	<input type="checkbox"/> Delete
Cake	Bakery Online	Food and Beverage	2020-08-04	<input checked="" type="checkbox"/> Delete
Necklace	Taobao	Jewellery and Accessories	2020-08-06	<input type="checkbox"/> Delete

[Update Orders](#)

Current Orders Tab

[View Current Orders](#)HomeAbout UsAccount

Past Orders



Name of Item	Website/Application	Category	Delivered On
Sneakers	Shopee	Shoes	2020-07-14
Cake	Bakery Online	Food and Beverage	2020-08-04


Past Orders Tab

Advanced Features:

1. New Order Input [DONE BY MILESTONE 2]

- Allow users to input **name** of the purchased item, **website/application** purchased from, **category** of item and estimated **delivery date**.


Add New Order



Name of Item:

Website/Application bought from:

Category:

Delivery Date: 

Category:

- Beauty and Personal Care
- Mobile and Gadgets
- Home and Living
- Food and Beverage
- Bags
- Jewellery and Accessories
- Shoes
- Clothings
- Miscellaneous

Category:

Category List for Item Input

- Upon submitting a new input, a "New order added successfully." message is shown.

2. Checkbox [DONE BY MILESTONE 2]

- Allow users to checkoff orders that **have been delivered**, then update the delivery status of those orders.


Category	Delivery Date	Delivered?
Shoes	2020-07-30	<input checked="" type="checkbox"/>
Jewellery and Accessories	2020-08-01	<input type="checkbox"/>
Clothings	2020-08-07	<input type="checkbox"/>

- Checkbox-ed orders will be **removed from the Current Orders** list and **added into the Past Orders** list.

[Home](#)
[About Us](#)
[Account](#)

[View Past Orders](#)

Current Orders



[Add new order!](#)

New order added successfully.

Current Orders				
Name of Item	Website/Application	Category	Delivery Date	Delivered?
Dress	Taobao	Clothings	2020-07-31	<input type="checkbox"/>
Cake	Bakery Online	Food and Beverage	2020-08-04	<input checked="" type="checkbox"/>
Necklace	Taobao	Jewellery and Accessories	2020-08-06	<input type="checkbox"/>

[Delete](#) [Delete](#) [Delete](#)


[Update Orders](#)

Current Orders before updating delivery status

[Home](#)
[About Us](#)
[Account](#)

[View Current Orders](#)

Past Orders




Past Orders			
Name of Item	Website/Application	Category	Delivered On
Cake	Bakery Online	Food and Beverage	2020-08-04

Delivered Order reflected in Past Orders

[Home](#)
[About Us](#)
[Account](#)

[View Past Orders](#)

Current Orders



[Add new order!](#)

Current Orders				
Name of Item	Website/Application	Category	Delivery Date	Delivered?
Dress	Taobao	Clothings	2020-07-31	<input type="checkbox"/>
Necklace	Taobao	Jewellery and Accessories	2020-08-06	<input type="checkbox"/>

[Delete](#) [Delete](#)

[Update Orders](#)

Current Orders after updating delivery status (delivered item removed)

3. Delete button [DONE BY MILESTONE 3]

- Allow users to **delete any orders** in the Current Orders list, in the event that the purchase was cancelled, or a wrong order was typed in.

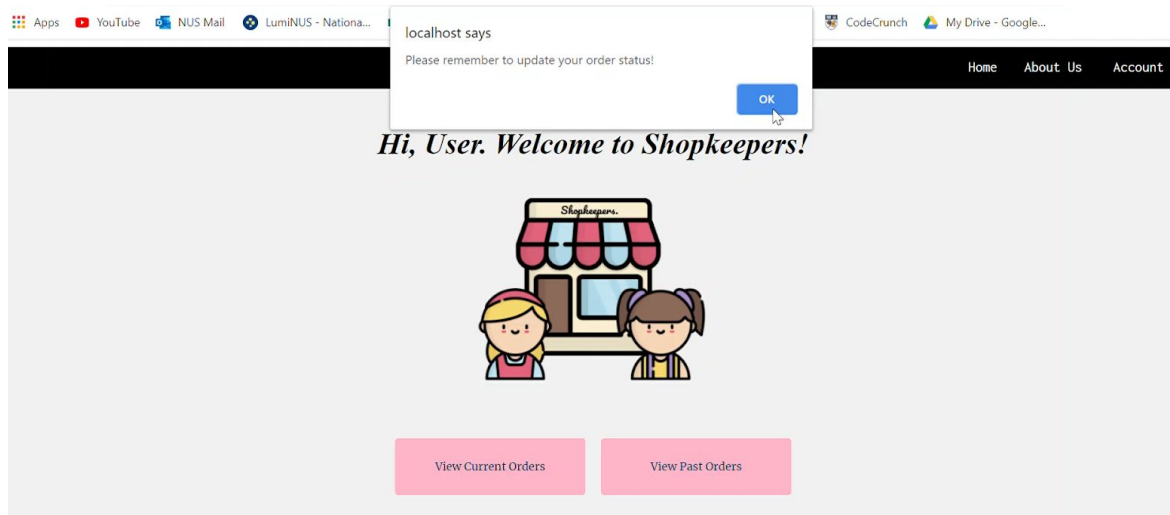
Delivered?	
<input type="checkbox"/>	Delete
<input type="checkbox"/>	Delete
<input type="checkbox"/>	Delete

4. Email Notification [Replaced with Feature 5]

- Emails of users are stored in the users' information database upon registration of an account.
- When the delivery date of an item coincides with the current date, an email notification will be sent to the user's registered email account.
- The notification serves as a reminder for the user to check for the order's delivery, and subsequently update the delivery status of the item in the Current Orders list.

5. Pop-up Reminder [DONE BY MILESTONE 3]

- A pop up will **appear upon user login**.
- This pop up **serves as a reminder** for users to recheck the delivery dates of their items, and to update the delivery status if necessary.



Reason for replacing Feature 4 with Feature 5:

From our own experience shopping online and user testing period, we realised that almost all **online shopping websites/applications will send notifications** to remind users that they are expecting a delivery on that day, be it through email, text or in-app messaging. Hence, we feel that it might **not be necessary** for another form of such similar notification for the user. Furthermore, sending email notifications may also spam the user's inbox, especially if they have many deliveries per day, thus **causing more inconvenience** for them.

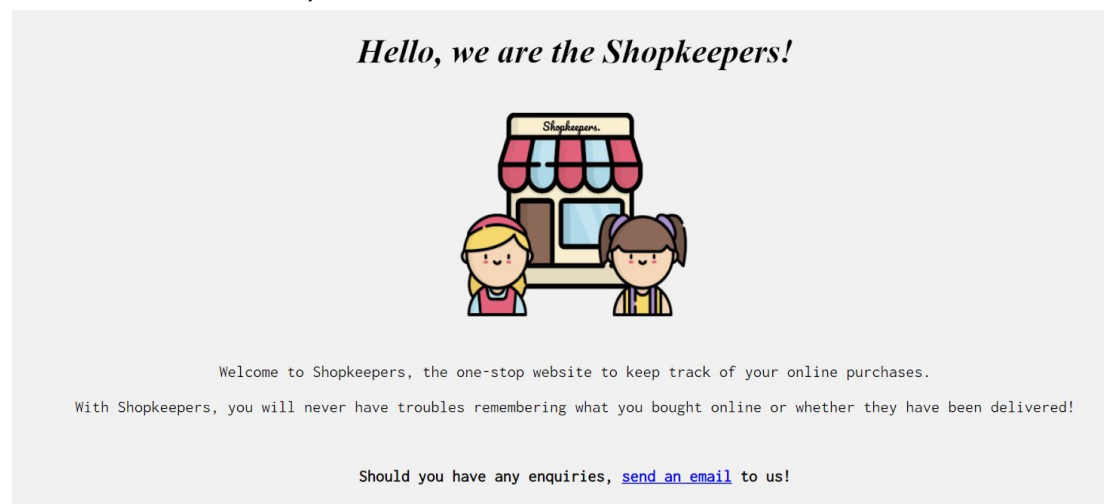
Instead, by using a pop-up reminder when the user logs in, it creates an **instant impact** since the message behind the reminder will be brought across to the user immediately. (i.e prompting them to update the delivery status of their item upon login) Hence, it can serve as a **more efficient form** of reminder.

Problems Encountered

1. Reflecting user input in the Current Orders list
 - Many obstacles were faced when trying to produce the Current Orders list, as we were **unsure how to present the user's order input** in the database onto the list.
 - After researching, this problem was overcome by using a **'while' loop** and the **'echo' function**.
2. Moving data from Current Orders to Past Orders.
 - It was difficult to **sync the data between these 2 tables**, but after reading more about PHP and MySQL online, this problem was overcome by using the **inserting and deleting functions** to move data from one table to another, within the same database.
3. Inability to host the website publicly.
 - Our biggest problem with the webpage thus far is the **inability to host the website publicly**. Only a localhost was used as we are unable to find a way to host the website publicly, with many of the website domains requiring paid subscriptions. We will research more about this issue and try to overcome it, if possible.
 - Nonetheless, we made a video showing how we navigate through the webpage, which can be found under 'Technical Proof of Concept'.

Errors Handling

1. Bugs for Webpage
 - Should any of the users face difficulties or have queries about the webpage, we included our **email in the Home page** so that users can contact us immediately within one click.



To: shopkeepers2020@gmail.com;

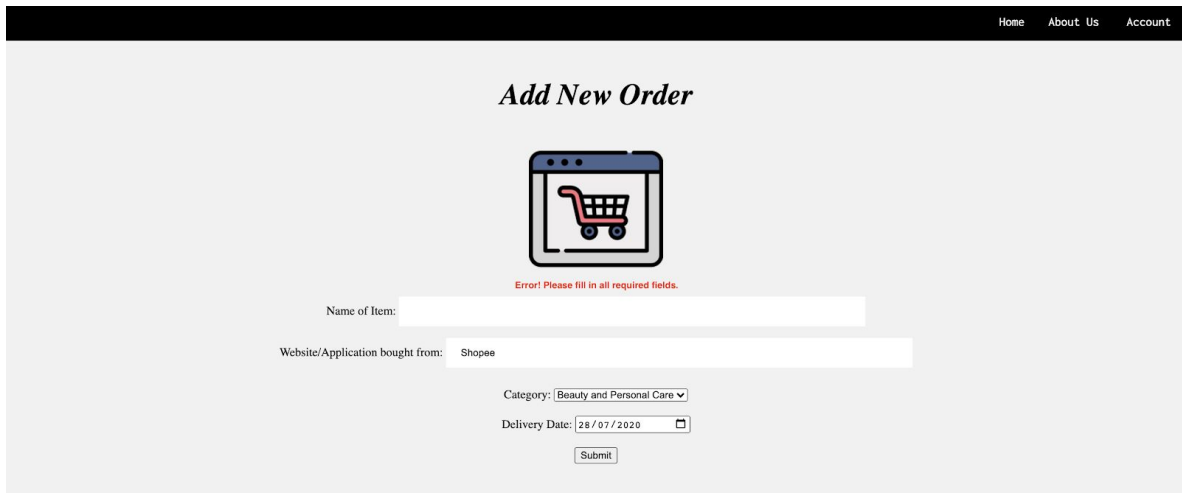
 Cc & Bcc

Subject

Redirects to user's mail upon clicking

2. Error in Selection

- If users did not make a selection/fill up all required fields, or added in an invalid input, users are **unable to add the orders**.



The screenshot shows a web form titled "Add New Order" with a shopping cart icon. A red error message "Error! Please fill in all required fields." is displayed above the input fields. The form includes fields for "Name of Item:", "Website/Application bought from:" (with "Shopee" selected), "Category:" (with "Beauty and Personal Care" selected), and "Delivery Date:" (with "28/07/2020" selected). A "Submit" button is at the bottom.

Error message to prompt user to fill in required fields

3. Error in User Registration

- When registering for a user account, the password chosen must have **at least 6 characters**, and the passwords must **match**.
- Failure to do so will result in an error message appearing.
- If the user picks a **username that has already been taken**, an error message will also appear.




The left screenshot shows the "Sign Up Page" with a form titled "Please fill this form to create an account." The form includes fields for "Username:" (Testing), "Email:" (testing@gmail.com), "Password:" (with a note "Password must have at least 6 characters."), and "Confirm Password:". The "Submit" and "Reset" buttons are visible. Below the form, it says "Already have an account? [Login here.](#)".

The right screenshot shows the same "Sign Up Page" but with an error message "Password did not match." displayed next to the "Confirm Password" field. The "Submit" and "Reset" buttons are still visible.

Error message to inform user of password creation error

Sign Up Page



Please fill this form to create an account.

Username This username is already taken.

Email

Password

Confirm Password

Already have an account? [Login here](#).

Error message to inform user of unavailable username

4. Error in User Login

- An error message will appear during login if the password is incorrect. User will then have to re-enter his/her password to login into his/her account.

Log In Page



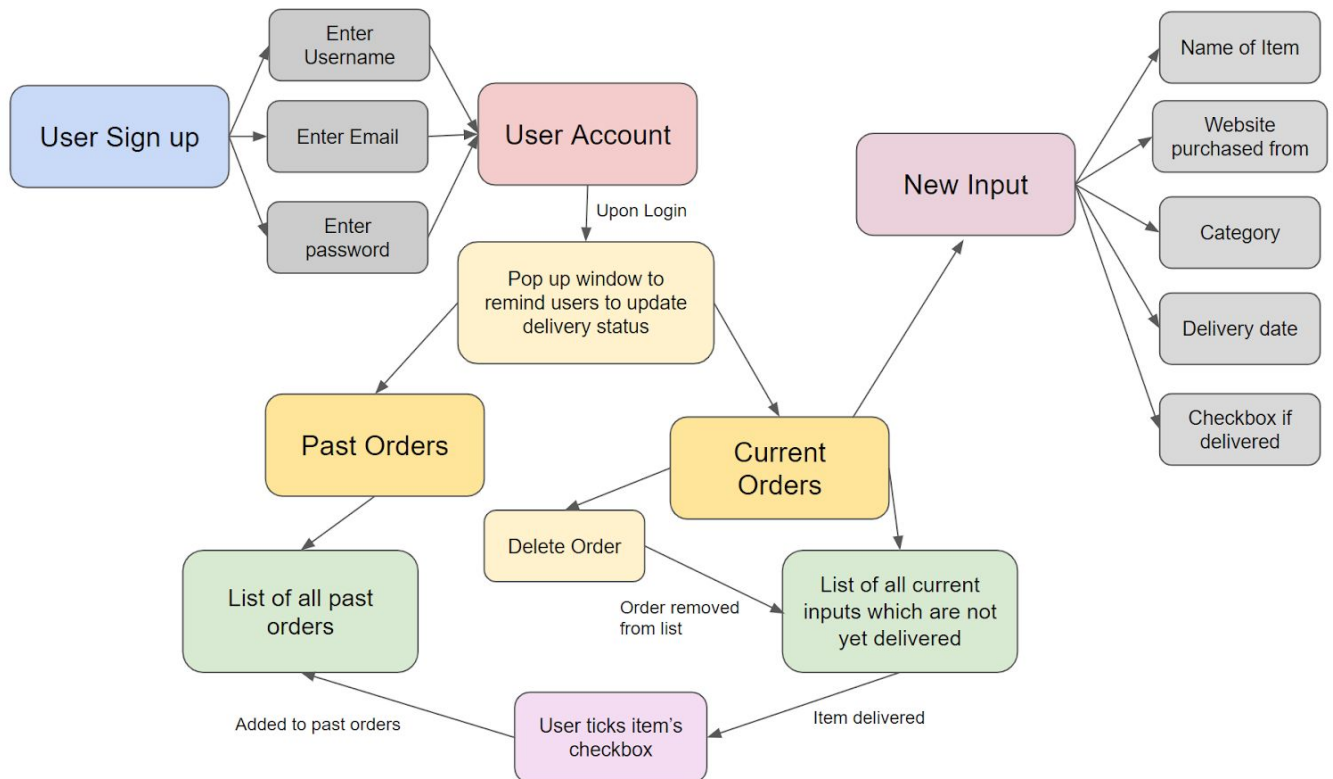
Please fill in your credentials to login.

Username

Password The password you entered was not valid.

Don't have an account? [Sign up now](#).

Program Flow



Tech Stack

1. Java
 - can be used to **modify website content** and make it behave in different ways in response to a user's actions.
2. Database (MySQLI)
 - used to search, sort, filter and present **information** based upon **web requests from users**.
3. HTML
 - allows us to **create and structure** sections, paragraphs, headings, links, and block quotes for our webpage.
4. CSS
 - allows us to describe the **presentation** of Web pages, including colors, layout, and fonts.
5. PHP
 - Used to **develop** the web page, **manage** dynamic content, databases and session tracking.

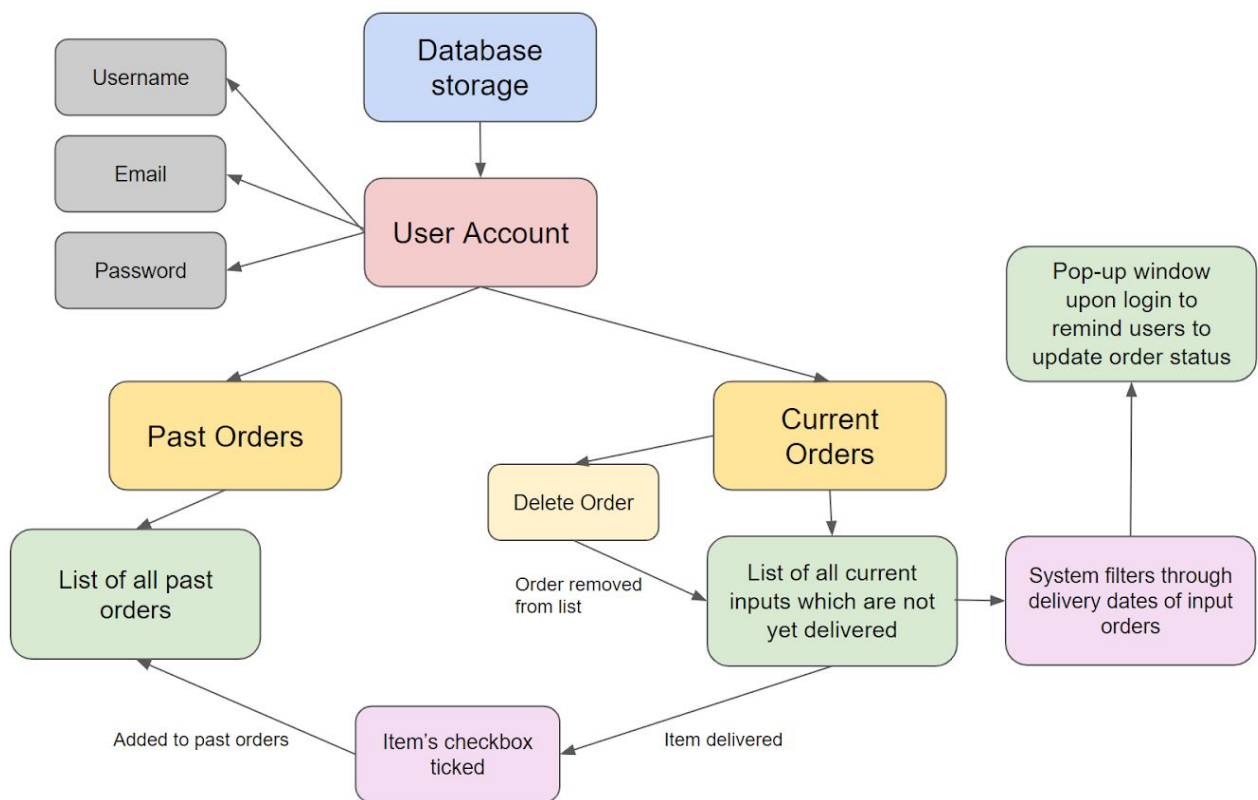
Technical Proof of Concept/Perform System

Please view the system walkthrough video using this link:

<https://www.youtube.com/watch?v=-SFc4krFhQ8&feature=youtu.be>

Github Link: <https://github.com/shopkeepers2020/Shopkeepers>

Simple backend storage database flow



User Testing

As part of our user testing, we invited a few of our friends who frequently shop online to test out our system. Through this user testing, we hoped to find out the following:

- Is the layout of the website **easy to navigate around**?
- Are the features of the website **user friendly and easy to understand**?
- Is it simple to create an account/login and logout?
- Is it simple to add in a new order or mark orders as delivered?
- Are there any **additional features** that we can add on?
- Any areas for **improvements**?

User Feedback and Findings

1. Layout of the website:

It is good that the website uses a **minimalistic design** so that there are not too many things going on that makes it difficult for the users to navigate around. However, it may be good to have **different fonts or images** for each different tab so that it is clearer which page the user is on.

Edits Made: We have edited and changed the graphics of the different tabs to make it more interesting!

2. Main Features:

It is **easy to add the orders** without much fuss. Users have noted that it might be **advantageous to have categories** of the items purchased (eg. Bags, Cosmetics, Home Appliances) and allow users to be able to sort the items purchased via categories.

Edits Made: We have changed our keying in of orders page such that the users are able to indicate the categories of the items purchased using a drop-down menu for easier references.

3. Email Notifications

It might be quite a **spam** for the user to receive an email whenever there is an order that is supposed to arrive for the day. Applications like Lazada/Shopee will also send an SMS whenever there is a delivery and hence **this notification might be unnecessary**.

Edits Made: We removed the email notification and coded a pop-up window with a message to remind the user to update their order status instead that appears whenever the user logs in. This allows the user to be immediately reminded of updating their order status.

Names: Choong Yong Xuan (A0203106B), Patricia Foo (A0203326U)

Project Log

S/N	Task	Date (dd/mm/y)	Orbitee 1 (hrs)	Orbitee 2 (hrs)	Remarks
1	Team Meeting #1	15/03/20	10	10	To formulate the full idea for the project and technology involved Acquire feedbacks from friends that do online purchases
2	Lift Off 1	13/05/20	3	3	Creating poster and video
3	Team Meeting #2	17/05/20	10	10	Gathered feedback from advisor Discussed features with more depth and create structure for project Delegated roles
4	Programming at Home: Self learning HTML To code out website	19/05/20	5	5	Using online tutorials
5	Team Meeting #3	25/05/20	6	6	Working on Milestone 1
6	Programming at Home: Downloading and learning of mySQL database	30/05/20	8	8	Using online tutorials and references
7	Coding out database for User Account	02/06/20	5	5	Enable registration of user account, logging in, logging out, and resetting of passwords
8	Team Meeting #4	03/06/20	5	5	To sort out the backend tech needed and database issues (Eg.

					setting up of account)
9	Troubleshooting of database errors	03/06/20	3	3	
10	Programming at Home: Downloading and learning of php	06/06/20	4	4	Using online tutorials and references
11	Coding out database for Items Input	10/06/20	7	7	Enabling input of new orders that is reflected on the Current Orders page
12	Backend coding for shifting of data from one table to another	11/06/20	15	15	Enables orders to be checklisted and removed from the Current Orders list, and then added into the Past Orders list
13	Changing layout HTML of website to fit with database	12/06/20	4	4	
14	Team Meeting #5	14/06/20	10	10	Discuss further possible features for website Gathered feedback from friends who are online shoppers on possible areas of improvement
15	Editing of database based of feedback	15/06/20	5	5	
16	Designing logo for website	15/06/20	4	4	
17	Team Meeting #6	23/06/20	10	10	Working on Milestone 2 Making of video
18	Editing code for user account	4/7/20	1	1	Allow user to input email to aid in notification feature
19	Troubleshooting of database errors	8/7/20	4	4	Ensure that only orders of that logged in user is reflected in the Current

					Orders and Past Orders list.
20	Coding delete buttons for each row of item input	12/7/20	7	7	Enable users to delete any of their orders on the Current Orders list
21	Researching on and attempting how to send notification email based on date provided in database	13/7/20	5	5	
22	Editing of milestone using feedbacks gained from evaluations	15/7/20	3	3	Added user testing and feedback segment
23	Editing aesthetics of webpage using feedback from user testing	17/7/20	5	5	Designed and added new graphics for each tab
24	Changes to the features	18/7/20	2	2	Removed email notifications, replaced with pop up notification
25	Editing of milestone 3	21/7/20	5	5	
26	Editing of poster and video creation of run-through of website	24/7/20	5	5	
27	Tying up loose strings for webpage and editing of milestone 3	26/7/20	5	5	Updated screenshots of our webpage

Total Hours Spent:

Orbitee 1 - Choong Yong Xuan (hrs)	Orbitee 2 - Patricia Foo (hrs)
156	156