Team22 Product Backlog

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1. Problem Statement

Nowadays, in our current tracking system, users are not able to see the delivery routes of their packages on a map. What users could only see is the text versions of the delivery messages. Our team intend to introduce a new app to provide a visual enquiry tracking systems. A visualized tracking system can help customers to know their packages' locations on the move. This, to a certain extent, reduces the anxiety of some users who can't query package information with the delivery routes of their packages on maps.

2. Background Information

When people want to track their packages, most of the time they would be troublesome, since current package tracking services provided by main logistics companies such as UPS, Fedex only show text-based information, and users can't track their packages and get the information they want in one step. Even if the user completes many steps, the user can only see simple non-visual delivery information. Without detailed map information, it is hard for users to imagine where their packages are and how far away their delivery is. With the help of our app, users will now be able to have a visualized tracking system to see their packages' locations on the move. This app will also help uses to see the shipping details and full tracking history.

3. Environment

We want to make sure that our application is accessible as possible as we can, so we choose to use JavaScript as our programming language, since JavaScript provides lots of features which comes with a good supply of useful tutorials and documentations so that we will be easy to learn and easy to use. Also, JavaScript is workable among many platforms. As for back-end, we choose to use Node.js, which will serve user requests and manage data. As for front-end, we choose to use Vue.js, which will allow users to keep track of packages.

4. Functional Requirements

Backlog ID	Functional Requirement	Hours	Status
1	As a user, I would like to know the information of tracked package by searching its tracking ID	3	Planned for Sprint 1
2	As a user, I would like to see the current status of tracked package	3	Planned for Sprint 1
3	As a user, I would like to see the estimated date of arrival of tracked package	3	Planned for Sprint 1
4	As a user, I would like to see the destination of tracked package	3	Planned for Sprint 1
5	As a user, I would like to see the starting point of tracked package	3	Planned for Sprint 1
6	As a user, I would like to see the current location of tracked package	3	Planned for Sprint 1
7	As a user, I would like to see the last update date of tracked package	3	Planned for Sprint 2
8	As a user, I would like to see the tracking ID of tracked package	3	Planned for Sprint 1
9	As a user, I would like to see the full tracking history of tracked package	8	Planned for Sprint 2
10	As a user, I would like to see the date of delivery if the tracked package is delivered	3	Planned for Sprint 1
11	As a user, I would like to see a map	5	Planned for Sprint 1
12	As a user, I would like to see my package location on a map	5	Planned for Sprint 1
13	As a user, I would like to zoom in/out the map	4	Planned for Sprint 1

14	As a user, I would like to drag on the map	4	Planned for Sprint 1
15	As a user, I would like to get brief information when clicking on the location marker	6	Planned for Sprint 1
16	As a user, I would like to see the travelling route of tracked package	8	Planned for Sprint 2
17	As a user, I would like to switch between different tilelayers	6	Planned for Sprint 2
18	As a user, I would like to see the scale in metric and imperial systems	4	Planned for Sprint 2
19	As a user, I would like to create an account	5	Planned for Sprint 2
20	As a user, I would like to login to my account	5	Planned for Sprint 2
21	As a user, I would like to check my personal list of tracked packages after I login	3	Planned for Sprint 2
22	As a user, I would like to add package to my personal list of tracked packages	3	Planned for Sprint 2
23	As a user, I would like to remove package from my personal list of tracked packages	3	Planned for Sprint 2
24	As a user, I would like to log out my account	3	Planned for Sprint 2
25	As a user, I would like to see a help page	4	Planned for Sprint 2

26	As a user, I would like to reset my password via email	4	Planned for Sprint 2
27	As a user, I should be able to receive an email after creating a new account	4	Planned for Sprint 2
28	As a user, I should be able to select my own security question when I create my account	4	Planned for Sprint 2
29	As a user, I should be able to customize my own security question answer when I create my account	4	Planned for Sprint 2

5. Non - Functional Requirement

Architecture:

We intend our application to support a web application. The website will connect to a database that will store all the necessary information of each package. The main framework of our project is Node.js. Node.js allows developers to create scalable server without threading by using event-driven programming. This approach aims to optimize throughput with many user IO operations at the same time. Node.js also works with any database that support JSON data and JSON for development stack.

Security:

For this application, users need to search their tracking ID in order to find their package and tracking history of package. The website does not provide any features that can reroute the package. And the website only “read” from the database. The website itself is not authenticated to modify any information inside the database. Even if a hacker obtain the tracking ID of a

package, there is no way he can modify any information of the package. The only way that hacker can do is try to break the logistic system of package storage database. However, this is also unlikely to happen since database logistic systems are usually heavily monitored

Usability:

The main task for this application is to keep the design simple to understand. We want our users should be able to learn and operate the application easily. The user interface should be clearly communication between the user and the application. The UI design should be clear enough to prevent user error, makes important information obvious. If time allows, we also want to create adaptive user interfaces that will give our users an excellent experiment no matter what kind of devices they are using.

Confidentiality:

For this application, we want to protect users' sensitive data. The tracking information of the application will not display the name, phone number and full address of the sender and recipient. Instead, the shipment progress will display the shipping date, estimate arrival date,location (only city and location). Except the administrator of this application, no one else can access users' sensitive data.

6. User Cases

Case 1:

Display map

Action	System Response
1. Open the map	2. Map loaded

Case 2:

Display package location

Action	System Response
1. Open the map	2. Map loaded
	3. Package location is highlighted by a marker.

Case 3:

Zoom in/out map

Action	System Response
1. Open the map	2. Map loaded
3.Zoom in/out	4.Map zoomed in/out

Case 4:

Drag map

Action	System Response
1. Open the map	2. Map loaded

3.Drag the map	4.map layer moves accordingly

Case 5:

Click on marker

Action	System Response
1. Open the map	2. Map loaded
3.Click on the location marker	4.Brief information such as address pops up

Case 6:

Display route

Action	System Response
1. Open the map	2. Map loaded
	3.Travelling route of tracked package appears

Case 7:

Switch between different tilelayers

Action	System Response
1. Open the map	2. Map loaded
3.Click on satellite layer	4.Tilelayer switches to satellite

Case 8:

Display the scale in metric and imperial systems

Action	System Response
1. Open the map	2. Map loaded
	3.Scale in metric and imperial systems appears

Case 9:

Create a new user account

Action	System Response
1. Click sign up	2. Redirect to another page
3.enter information	4.store information and create a new account

Case 10:

login

Action	System Response
1. Enter user information and click login	2. **authorization server handles user info**
	3. Redirect to another page

Case 11:

Reset account password

Action	System Response
1. Click forget password	2. **Redirect to another page and ask user to enter email address**
3. Reset password by using the link sent by the server	3. Update user info