



SHIP US SAFE PROJECT

USER GUIDE

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Introduction and Purpose

This application has been designed to assist people in booking ships and planning for a route on budget. This application has several features which display details of user's route - including their starting point to destination, adding waypoint or deleting unnecessarily waypoint, estimated arrival time, estimated total distance travelled and cost. In addition, the application allows users to choose ships and departure time.

The purpose of this document is to provide users easy instruction on how to use this application. Known Bugs or limitations is also provided to make user to become familiar with this application.

App Features

When user decides to use their own ship, user will see this page below on the screen. User has to input details about the ship, such as name, speed, cost per kilometer, description and comments. Then the ship could be used for router.

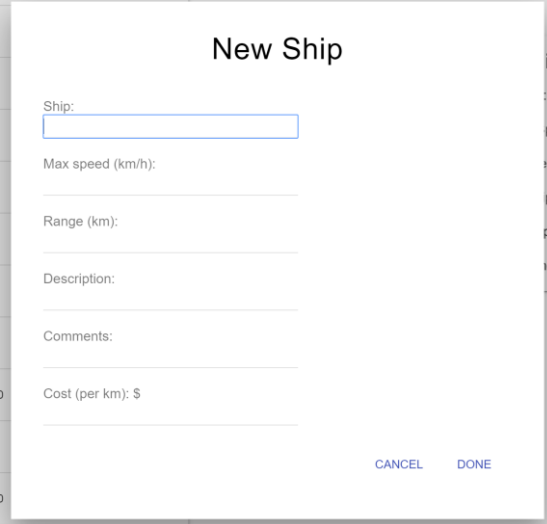
A screenshot of a mobile application screen titled "New Ship". The screen contains a form with the following fields: "Ship:" with a text input box, "Max speed (km/h):" with a text input box, "Range (km):" with a text input box, "Description:" with a text input box, "Comments:" with a text input box, and "Cost (per km): \$" with a text input box. At the bottom right of the form, there are two buttons labeled "CANCEL" and "DONE".

Figure 1: Sample of the page that allow users to add their own ship

When user decides to add their own port, he will see this page below on the screen. User has to select the position of the port and input the type and size of port.

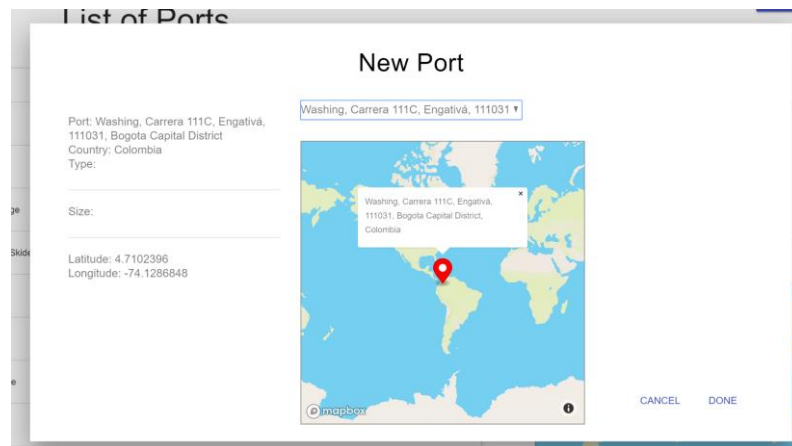


Figure 2: Sample of the page that allow users to add their own port

When user decides to make a booking on the website, he will be able to input information about his journey.

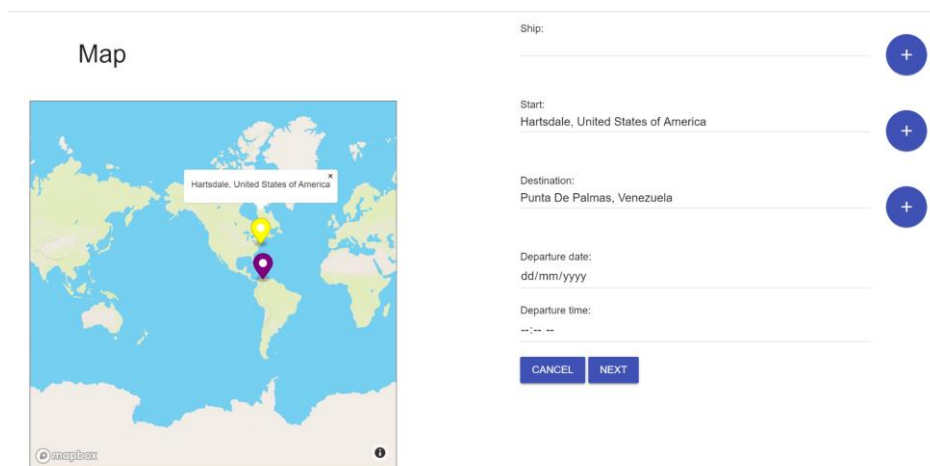


Figure 3: Sample of the page where user input information about journey

Instructions for Use

This application allows user to book the ship and travel between the chosen starting point and chosen destination. In addition, user can also their intended waypoint in the route. The following description with corresponding pictures will guide user to use application appropriately.

First of all, the pages will be loaded as the figure 4 below on the tablet.

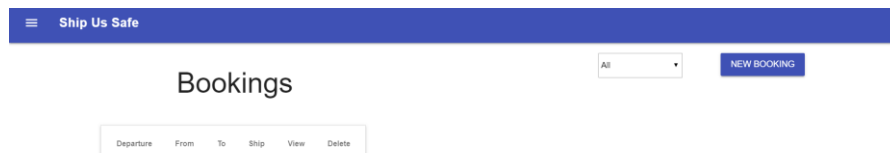


Figure 4: Sample of page when the application loads

This application has three main functionalities: add ship, add port and book a new route. Here is a general guide on how to use each of the functionalities.

Add Ship:

1. Go to the loading page's top left corner and click on the menu button in the following image.

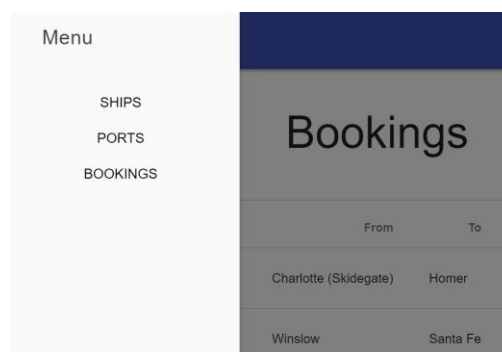
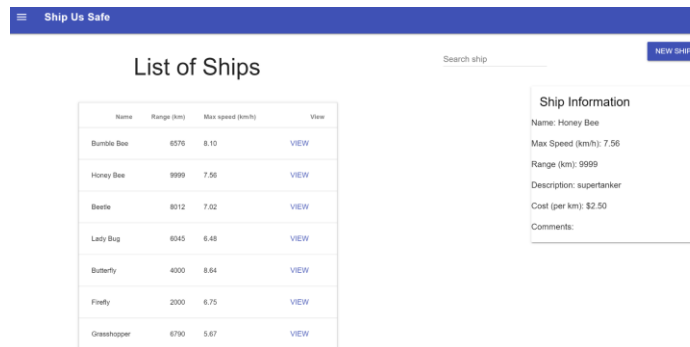


Figure 5: Menu

2. Select "SHIPS". This menu can be used to go to different interface sections with these three buttons in figure 5.
3. List of ships should appear on the top right corner. User can also view each ship information by clicking 'VIEW' button. In addition, there is another button called "NEW SHIP" illustrated in the following image.



Name	Range (km)	Max speed (km/h)	View
Bumble Bee	6576	8.10	VIEW
Honey Bee	9999	7.56	VIEW
Beetle	8012	7.02	VIEW
Lady Bug	8545	6.48	VIEW
Butterfly	4000	8.64	VIEW
Firefly	2000	6.75	VIEW
Grasshopper	6790	5.67	VIEW

Ship Information

Name: Honey Bee

Max Speed (km/h): 7.56

Range (km): 9999

Description: supertanker

Cost (per km): \$2.50

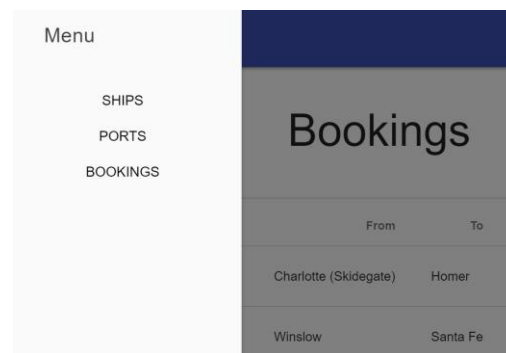
Comments:

Figure 6: Ship information page

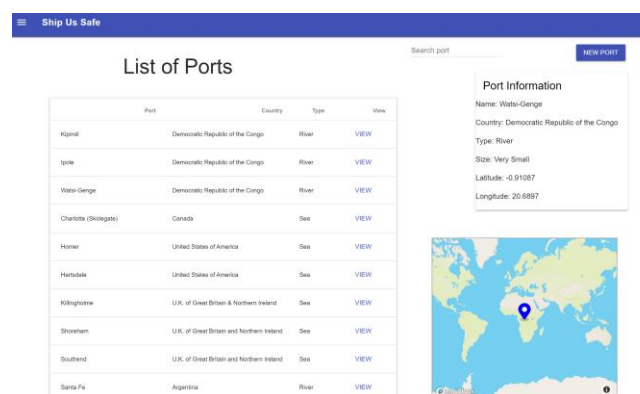
4. Input some general information about the ship. (Refer to App features Figure 2 to see detail)
5. Press “Done” after finishing editing the details and the new ship will be stored in the “SHIPS” section.

Add Port:

1. Go to loading page’s top left corner and click on the menu button in the following image.
2. Select “PORTS”.



3. List of ports should appear on the top right corner. User can also view details of port by clicking ‘View’ button for each port. Moreover, the port location will be shown on the map. Moreover, there is a button called “NEW PORT” illustrated in the following image.



Port	Country	Type	View
Kigali	Democratic Republic of the Congo	River	VIEW
Iyole	Democratic Republic of the Congo	River	VIEW
Wato-Genge	Democratic Republic of the Congo	River	VIEW
Charlotte (Skidegate)	Canada	Sea	VIEW
Homer	United States of America	Sea	VIEW
Hartsville	United States of America	Sea	VIEW
Kilgoblie	U.K. of Great Britain & Northern Ireland	Sea	VIEW
Shoreham	U.K. of Great Britain & Northern Ireland	Sea	VIEW
Southern	U.K. of Great Britain & Northern Ireland	Sea	VIEW
Santa Fe	Argentina	River	VIEW

Port Information

Name: Wato-Genge

Country: Democratic Republic of the Congo

Type: River

Size: Very Small

Latitude: -0.91087

Longitude: 26.6887




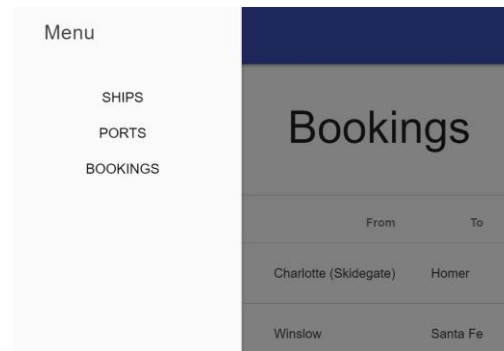
Figure 7: Port information

4. Search the name of place of input.

5. Select the specific place on the drop down list below the input section. (Refer to App Features Figure 2 to see detail)
6. Input some general information about the port.
7. Press “Done” after finishing editing the details and the new port will be stored in the “PORTS” section.

New Booking:

1. Go to the loading page’s top left corner and click on the menu button in the following image.



2. Select “BOOKINGS”.
3. Booking history details should appear. On the top right corner, there is a button called “NEW BOOKING” illustrated in the following image.

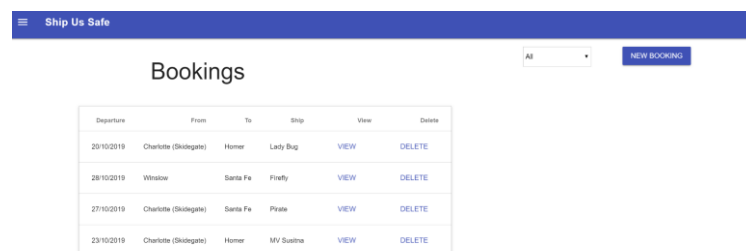


Figure 8: Booking details

4. After clicking the “New Booking” button, the following page (Figure 9) will be loaded on the tablet. User can start selecting a ship from the drop down list or inputting a new ship by clicking on the add button as shown in the image.

Figure 9: Booking

5. Select a starting port from the drop down list or input a new port by clicking on the add button as shown in the image.
6. Select a destination port from the drop down list or input a new port by clicking on the add button as shown in the image.
7. Select the departure date and time and click “NEXT”. The Figure 10 page will be loaded on the tablet.
8. User can select everywhere on the map which is displayed on the left side of the tablet as a waypoint.

Figure 10: Page for adding or deleting waypoint

9. Once determined on the way point, click “ADD WAYPOINT” .
10. If the waypoint added does not meet the user’s requirement, use the pointer to overlap the marker of unwanted way point and click on “DELETE WAYPOINT”.
11. After choosing the waypoints, the user will be able to view the route information like in Figure 10. If the user is prompted to click on the waypoint marker, the weather information will pop up on the left side.

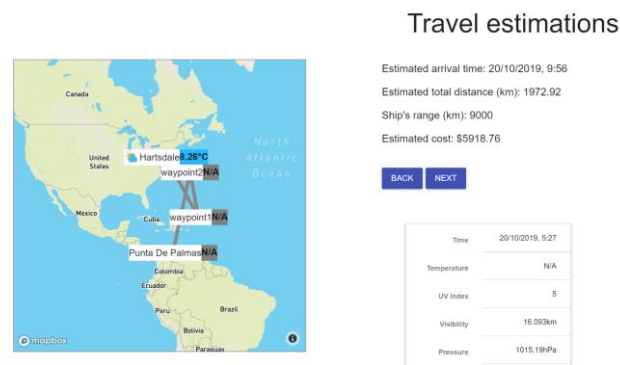


Figure 10: Travel estimations shown

12. If there are no further changes, clicking on the next button will bring up a confirmation page. It will list all the details of the journey in case the user changes mind. The time displayed uses 24-hour time format. The final step is to click the 'CONFIRM' button.

Booking confirmation

Ship: Pirate

Starting Port: Hartsdale, United States of America

Destination Port: Punta De Palmas, Venezuela

Departure date and time: 20/10/2019, 0:06

Arrival date and time: 20/10/2019, 9:56

Travelling distance (km): 1972.92

Booking cost: \$5918.76

[BACK](#)
[CONFIRM](#)

Figure 11: Booking confirmation

13. The booking is now successful and it can be viewed on the main bookings' page by clicking the view button. Times are displayed in 24-hour time.

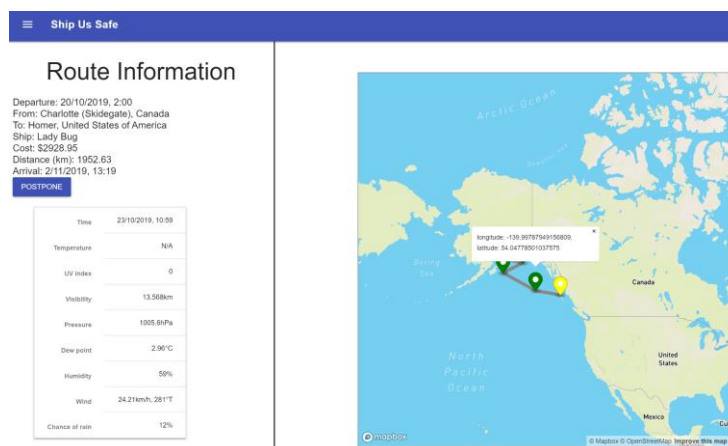


Figure 12: Route Information on main page

14. As shown in figure 12, if you want to look at the forecast for a point on the map, click on a point and its forecast will be displayed on a table.
15. You can postpone the booked route by clicking the 'postpone' button. However, the postpone dialog will only show up if today is before the current departure date.

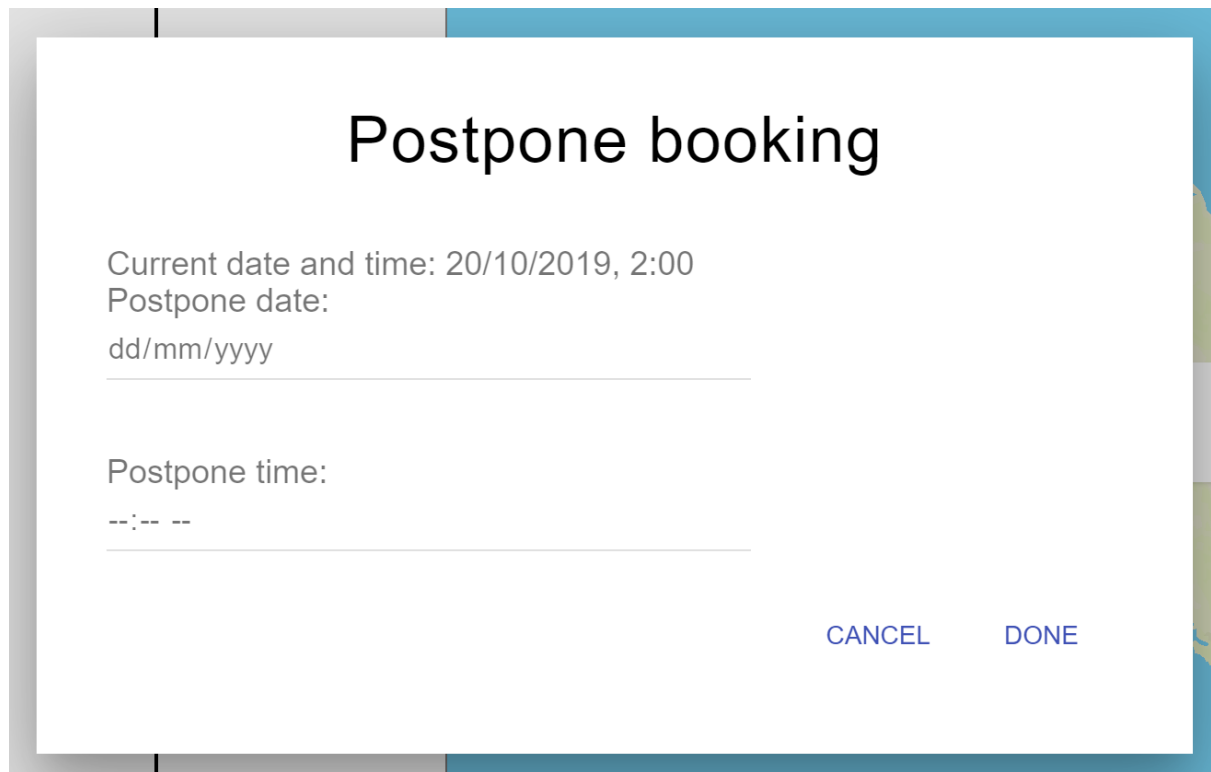
A screenshot of a mobile application dialog box titled "Postpone booking". The dialog has a white background with a blue border. It displays the current date and time as "20/10/2019, 2:00". Below this, there is a label "Postpone date:" followed by a text input field with a placeholder "dd/mm/yyyy". Further down, there is a label "Postpone time:" followed by a text input field with a placeholder "--:-- --". At the bottom right of the dialog, there are two buttons: "CANCEL" and "DONE", both in blue text.

Figure 13: Postpone dialog

16. Enter the date and time to postpone to later than the current date and time. The current time is shown as 24-hour time.

Known Bugs or Limitations

Overall, it is a functionally comprehensive app and it is relatively easy for the user to book their route. However, there are some limitations to the app which could make it inconvenient or impractical for the user to use the app. Some of the limitations are:

- When checking the weather conditions of the waypoints or the end points, sometimes it shows the temperature as undefined. This is because some of the coordinates are not listed in the DarkSky API. So, it may interrupt the user to plan their journey. Possible solution is to find and use another weather API which will cover information about all places available on the map.

- The weather checking button is relatively difficult to be found. After the route has been planned, the user will be able to check the weather condition by clicking on port name or destination name. However, a slightly inaccurate precision of clicking would prevent the user from viewing the weather condition. Try to click the point as close to the centre as possible.
- When the user is setting up their way points, if the distance between two way points are small, the marker pin will be difficult to be placed precisely. Without zooming in, the markers will overlap and can barely be adjusted. It is recommended to not place them too close to each other.
- When adding ships and ports, 'e' can still be inputted into sections that only accepts number input. This is due to the reason that the app perceives 'e' as an exponential which is considered as a number. Furthermore, multiple decimal places can be inputted to create ellipsis. This would also prevent the user from adding ships and ports.
- Due to coordinate issues, ports and waypoints' name and weather condition do not display. This is because the DarkSky API system cannot receive data from the longitude and latitude provided and the system believes it is out of range. It is recommended to avoid adding any waypoints at those locations or using any ports at those locations.
- The app should be used logically, if any illogical values are inputted such as putting in an infinitely big number in the year input when booking route, it will cause unpredictable errors and may lead to malfunction of the app.
- The route is always shown as a straight line between two ports. However, when travelling between them, it is not possible to travel as a real straight line. And the distance calculated by route will affect other estimated result.

Possible solution is that we could use another map API such as Google Map API.

Common Questions

- What if I added in a new ship with the same name as one of the ships in the list? The app does not allow users to add in ships with the same name as the one already in the list, regardless of the case in the name input. Names must be different, although you can input the same names if the name lengths are different.

Possible solution is to modify the searching algorithm. The optimal method is adding more condition to check whether the ship is already in the list or not. Checking the ship's maximum speed, range, description, comments as well as cost can also be in consideration.

- Can names of the new ship or port be left blank? No, the app will not add a new ship or port if their names are left blank, even if filled with spaces only. You must always provide a name when adding a new ship or port.
- How do I set the time input to AM or PM? When inputting time, the third '--' part requires input as AM or PM. To input AM or PM, you can click the part and type a to get AM or p to get PM. You can also click the part and click the up-down button if you hover over the time input field.