

Requirement Specifications

Jason Tay, Zhiyue Li, Hanlin Cheng, Haikuan Yang

TEAM 078

21 October 2019

Project information:

Our client, from the AuHumane organisation, wants us to create an app where he can book a ship and plan routes for the ship to travel from their starting port to the destination port. Our objective is to allow the user to select any available ships and ports, use their own ship if they like as well as adding any waypoints to create their own routes with weather predictions along with it. The main users would be the customers and supporters from AuHumane.

The user will be able to view information on available ships and create any new ones. User can also view available sea ports and create new ones if necessary. The user can create new routes and set their departure date. As such, weather predictions and estimation arrival times for waypoints and the destination port are determined with a confirmed start date. If the total travel distance of the route is above the ship's range, the route is considered invalid.

App needs to be completed on week 12, Monday 8pm. Below are the notes on the app requirements:

- User can add their own ships in. Make up their own routes.
- User can enter waypoints. Min: 5km, Max: 100km apart. Total distance of route within ship range. Waypoints can be anywhere if they are at an appropriate distance from their previous waypoints.
- Client wants to know time delay. Nice to know estimation of getting to destination. Estimation can be based on ship speed.
- We can trust that entered path doesn't go through land. Nice to add feature to check if path goes through land.
- Can be hard to have button to postpone based on bad weather.
- Popup weather data for ports.
- Any relevant weather data is necessary. Can also use weather criteria to display the risk of sailing.
- Weather can be predicted sequentially along the routes. Weather prediction given for each waypoint and ports on predicted time after start date.

Feature: Create route - User books a route

As a client, I want to know how many waypoints are in the route so that the shortest and most optimal route can be made.

As a client, I want to know the distance between each point so that I can get to know the total distance needed for the route.

As a client, I want to be able to confirm booking so that I can book the route.

Feature: Display routes - User can view or delete booked routes

As a client, I want the booked routes to be displayed so that I can select any of them to view or delete.

As a client, I want to view the booked routes so that I can see their information and a map of their journey path.

As a client, I want to delete a booked route so that they are no longer displayed when I do not need them anymore.

Feature: Ship - ships can be displayed and used for booking route

As a client, I want to use my own ship for the route so that I can travel further enough to finish the route.

As a client, I want to view all ship information on distance and speed so that I can choose the fastest ship to travel the whole route.

As a client, I want to view information about the ship's maximum travel distance so that I can use this ship to complete the journey.

As a client, I want to know the ship's maximum speed so that I can roughly calculate the arrival time for the whole journey.

As a client, I want to view the ship's cost so that I can choose the optimal budget for the route.

As a client, I want to add in new ships so that I can have better ships to choose from for traveling the route.

Feature: Ports - ports can be displayed and used for defining the booked route

As a client, I want to view all ports and their information so that I know their locations, size and type.

As a client, I want to add in new ports so that I can keep track of all ports around the world.

Feature: Weather condition - forecast is predicted for the route

As a client, I want to view the information of the current weather condition being given on the starting point so that I can check if the condition is fine for travelling.

As a client, I want all estimated weather conditions for my destination predicted by the estimated time so that I can predict what the weather will be like over there.

As a client, I want to be given the best-guess forecast of the weather of the destination if the duration of the journey is over 7 days so that I can still get a proper estimation of the weather.

As a client, I want to be alerted if the temperature is bad so that I can postpone the route to the time the weather will be good enough for the ship to travel.

Feature: waypoints, starting point and destination define the booked route

As a client, I want to be able to add in new ports so that I can have more ports for choosing the starting point and destination.

As a client, I want to update my position automatically so that I can know the progress of the route.

As a client, I want the name of the chosen starting point, waypoint(s) and destination to be displayed on the map so that I know where I have to go in the route.

As a client, I want to add a waypoint in the journey so that I can arrange my route to be an optimal one.

As a client, I want to delete a waypoint in the journey so that I can arrange my route to be an optimal one.

Feature: Departure time, estimated arrival time and postpone

As a client, I want to set the departure time so that I can set up the time to begin my route.

As a client, I want to view the estimated arrival times for the destination and waypoints so that I can get to roughly know when I reach each of those points.

As a client, I want to postpone the route so that I can set the schedule to begin at a later date.