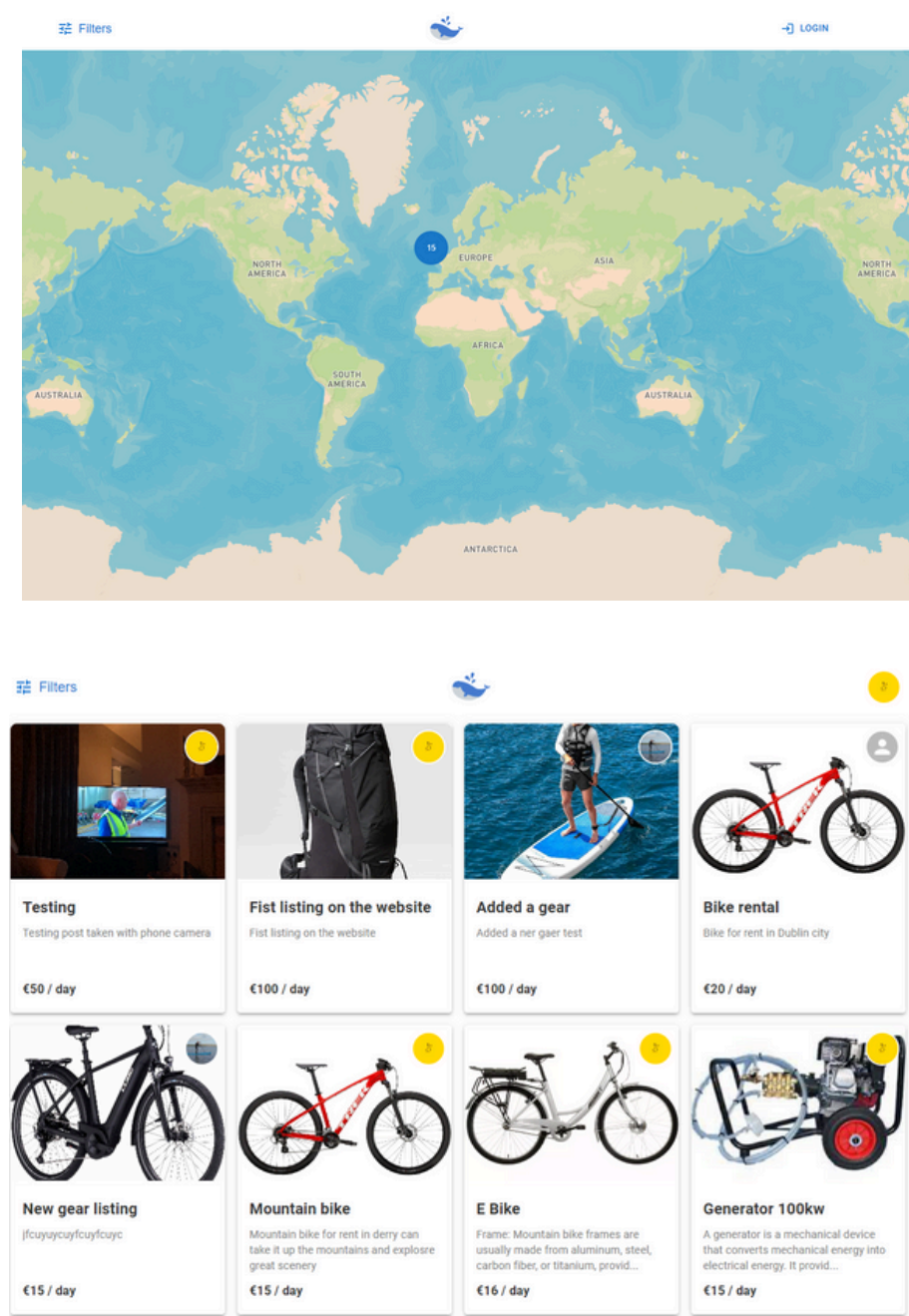




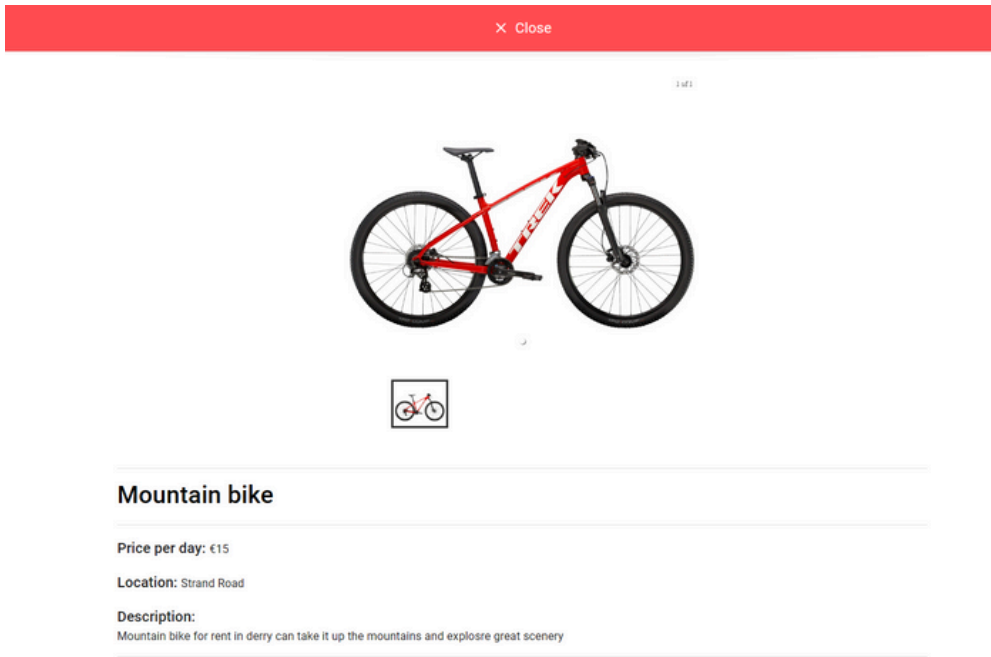
THE GEAR DEPO

Is a **RENTAL WEBSITE** which connects users to outdoor gear near them.
Utilizing MERN stack technology.

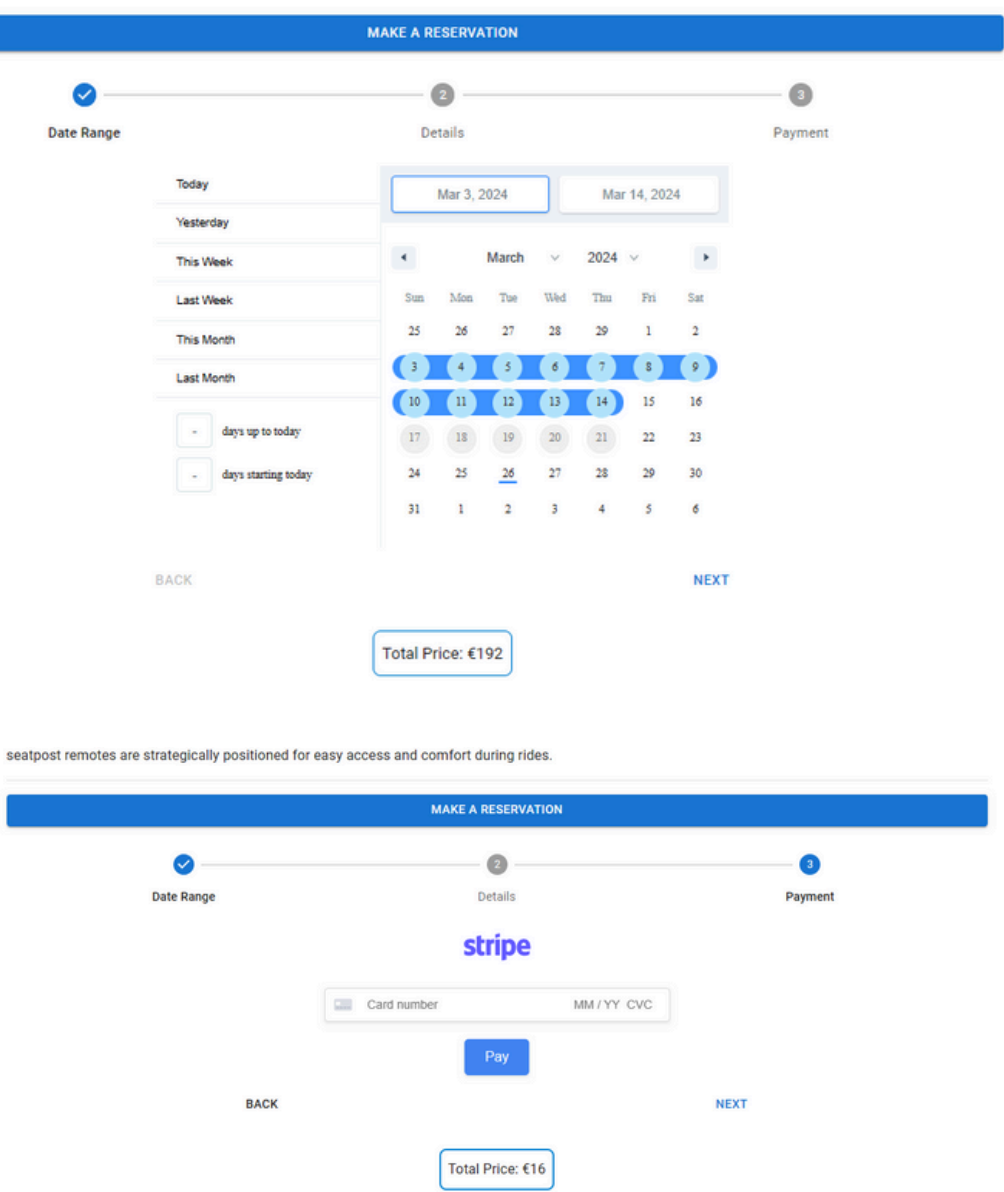
Browsing



Choosing



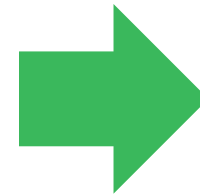
Reserving



Research

During my research found that:

- Rental business had an increase growth of **15-20%**.
- **30%** of businesses have **NO ONLINE PRESENCE**.
- **40%** of bought outdoor gear is **UNDERUTILIZED**.

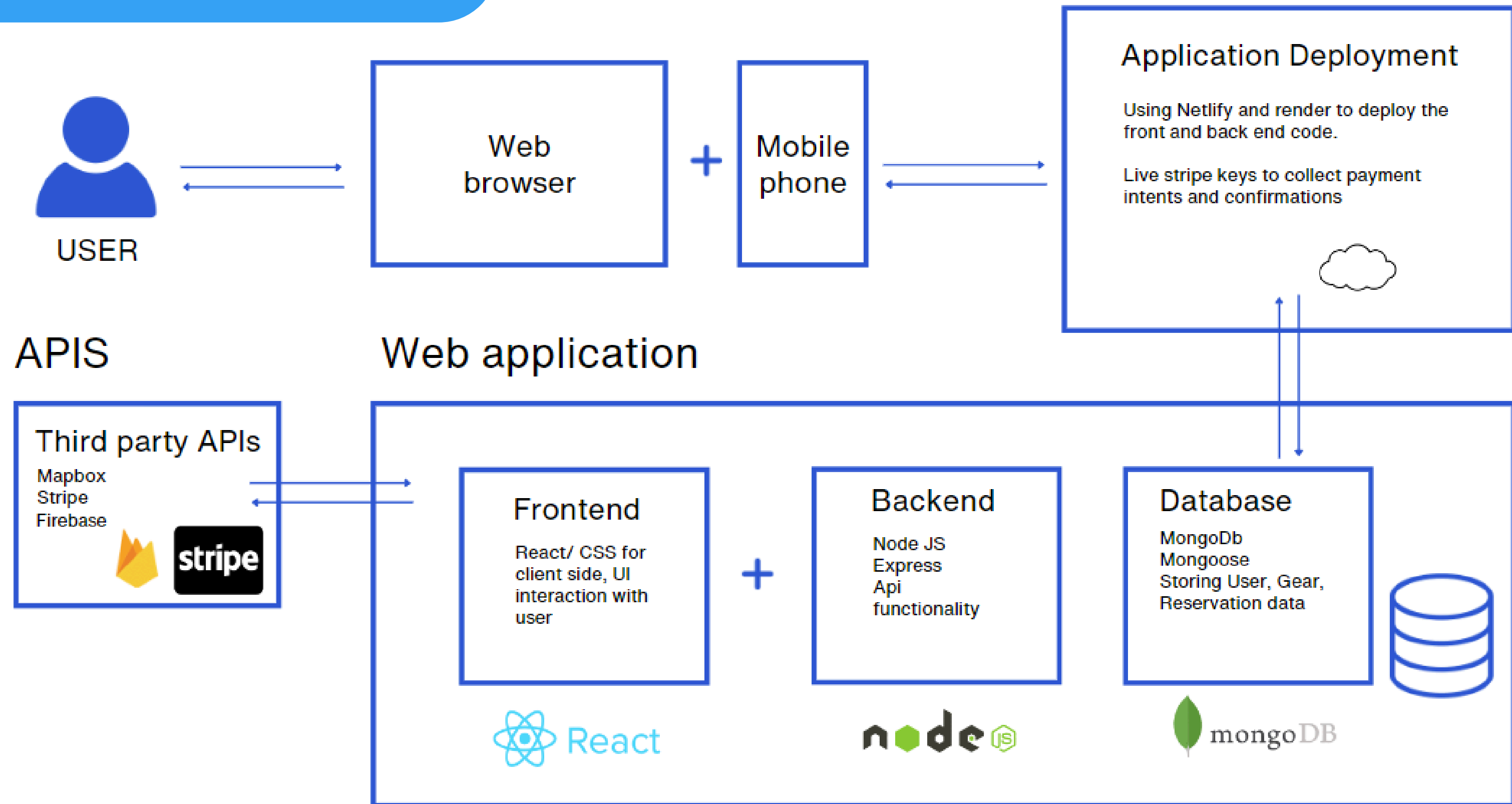


Gear Depo:

- Provides a **LOW COST** access to expensive gear.
- **REDUCES PRODUCTION** and need for new gear.
- Provides a **FREE PLATFORM** for businesses and users.



Technical

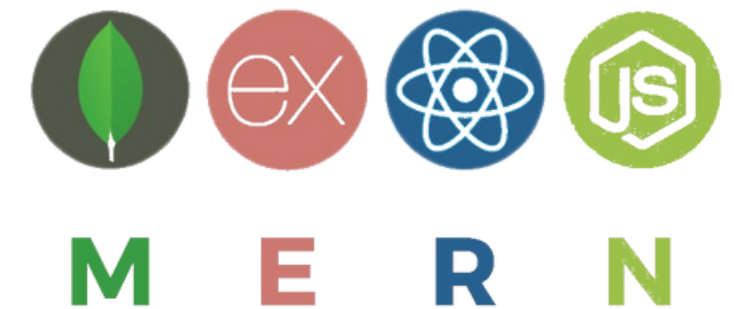


Technical

Technologies

MERN Stack

- **MongoDB** – Selected for its flexibility and scalability
- **Express** – provides structure for building web applications, handling HTTP requests, routing, middleware, and more.
- **React** – Fast loading times and improved SEO.
- **NodeJS** – Allows to build server side applications.



Other technologies

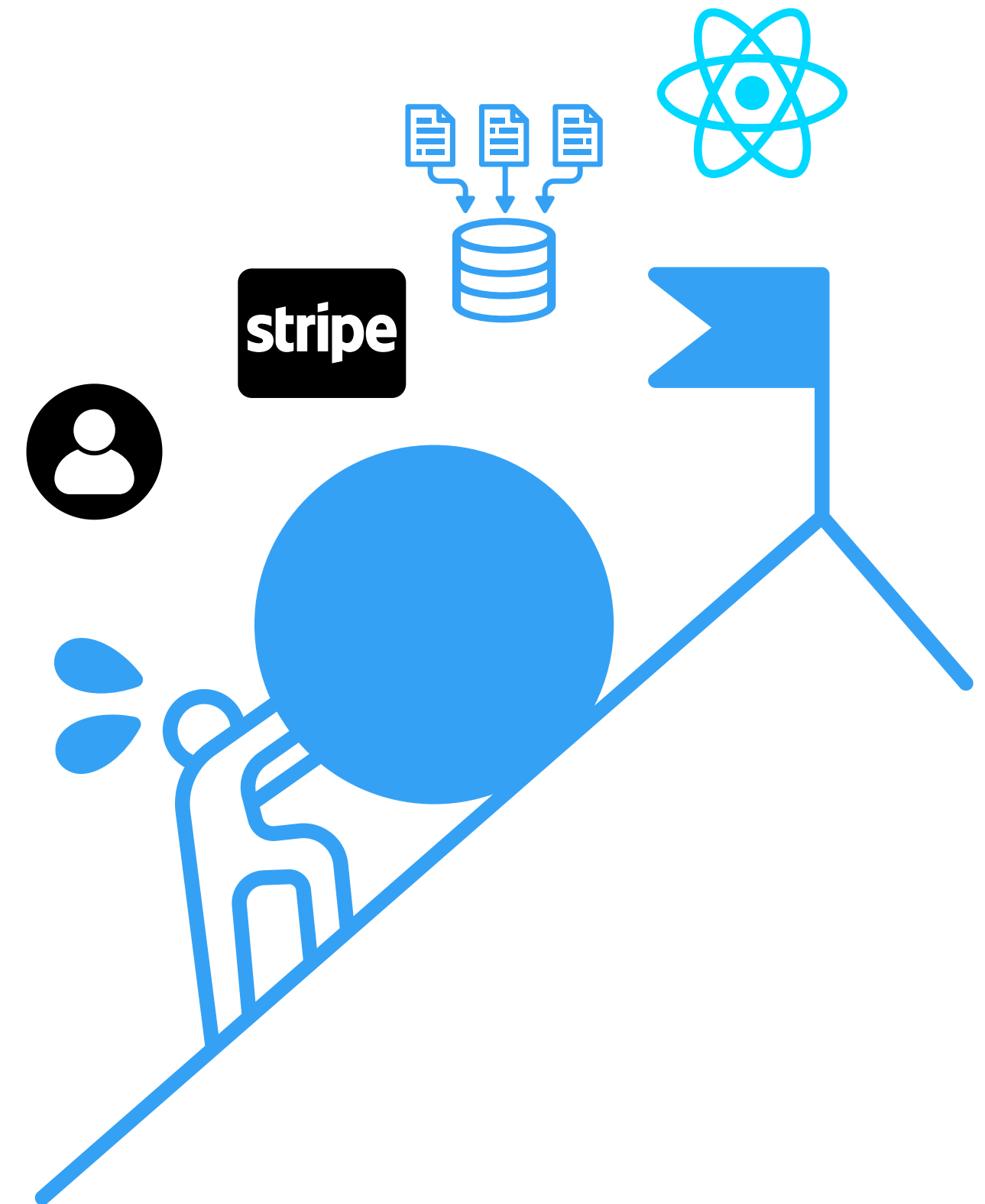
- **JWT Tokens** – Security and session authentication.
- **VS Code IDE** – for development
- **Firebase** – Image upload and file storage.
- **Stripe** – Secure payment system.
- **Mapbox** – Location and mapping service



Technical

Challenges faced

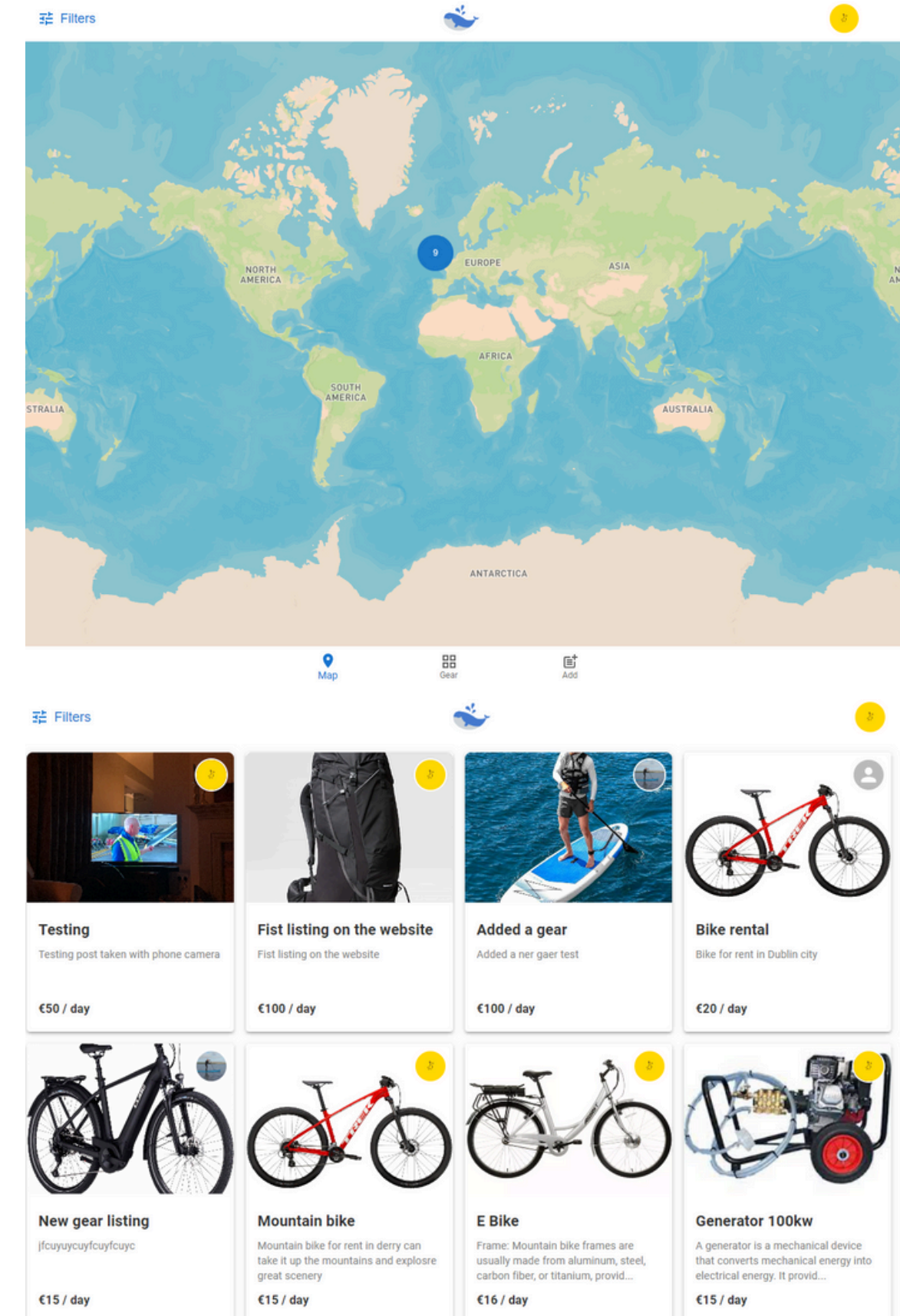
- **Database design** – Adding necessary fields for data infrastructure.
- **Stripe payment** – Api integration, payment promises.
- **Mapbox** – Api integration and clusters.
- **UI design**
- **User authentication** – Token assignment and security.
- **React Components** – Integrating new components



Understanding

Worked on various concepts such as:

1. **Asynchronous** programming.
2. **State management** in React.
3. User authentication.
4. Data modelling in MongoDB.
5. Secure payment processing using **Stripe**.
6. API integration.
7. Implementing an **interactive map**.
8. **Firebase** for image storing.



3 Step payment and reservation system.

MAKE A RESERVATION

1

2

3

Date Range

Details

Payment

Today

Yesterday

This Week

Last Week

This Month

Last Month

Selected dates

Reserved dates

days up to today

days starting today

Mar 3, 2024

Mar 14, 2024

March

2024

25

26

27

28

29

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

1

2

3

4

5

6

BACK

NEXT

Total Price: €192

MAKE A RESERVATION

1

2

3

Date Range

Details

Payment

Phone *

+353858117924

✓

Purpose *

Exploring the city for the week.

✓

Additional Info *

Can i pick this up in the morning ?

✓

BACK

NEXT

Total Price: €192

MAKE A RESERVATION

1

2

3

Date Range

Details

Payment

stripe

42

Save with link

Pay

BACK

NEXT

Total Price: €192

Completion of fields

All the fields, DateRange, Info and Payment are filled out a paybutton is visible to the user.

Payment method created

When pay is clicked a payment method is created and sent back to the reservation model

Reservation object

Reservation object is created with payment method and is passed to the createReservation function

Backend Router to controller

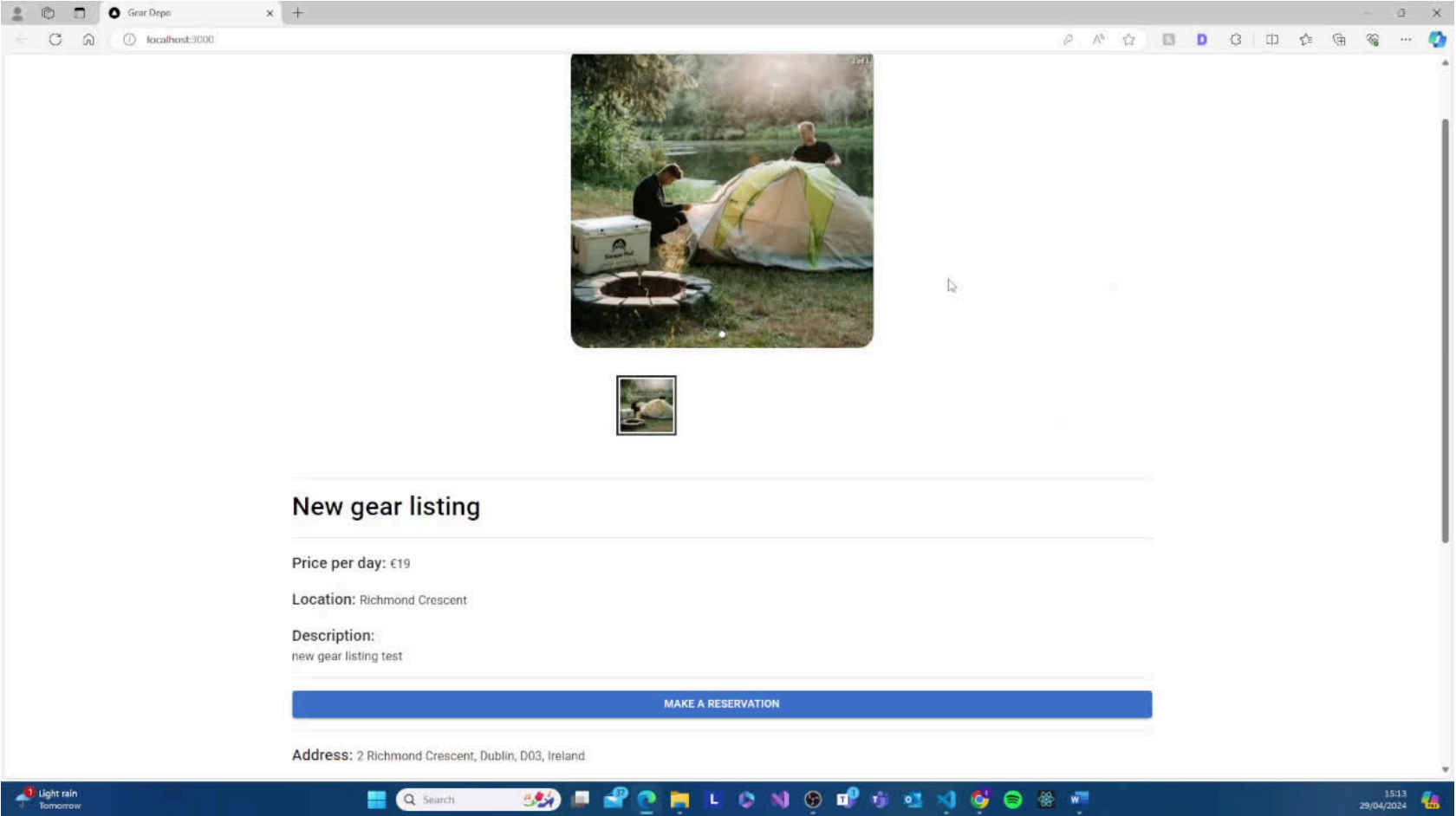
Request is sent to / create-payment-intent, createPaymentIntent Controller which is responsible for generating a key and communicating wiht the stripe

Payment intent

CreateReservation then creates a payment intent which is sent to the backend and i a succesful result is recieved the reservation then is created

Successful stripe response

After succesful response from stripe the reservation action then proceeds and a reservation is created

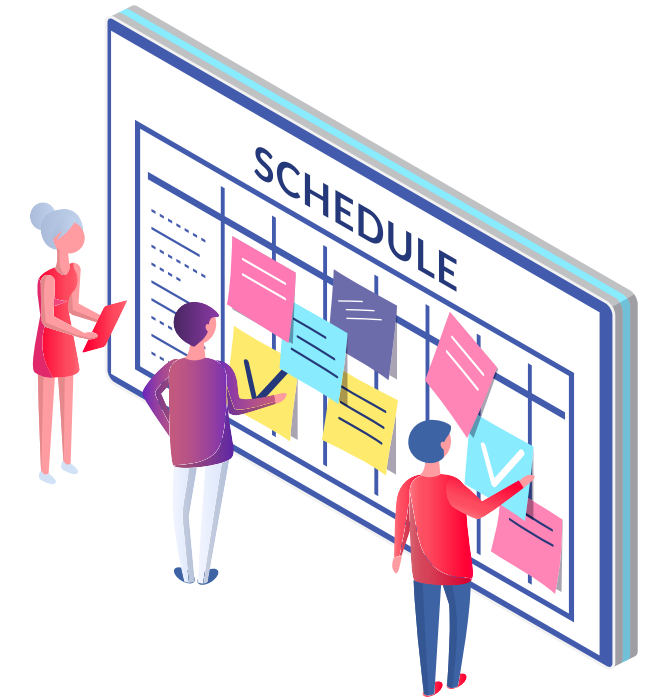


Organisation

Tools

Jira – Create user stories, tasks, and epics to break down the project into manageable units.

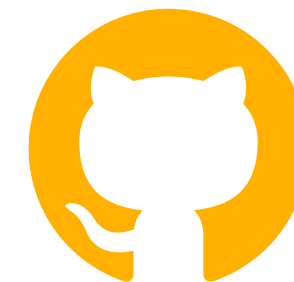
 Jira Software



OneNote – For collaborative documentation.
Notebooks to organize project-related notes and any other important information.



Github – For version control. Commit and push code changes regularly to keep track of project, maintain a reliable version history.

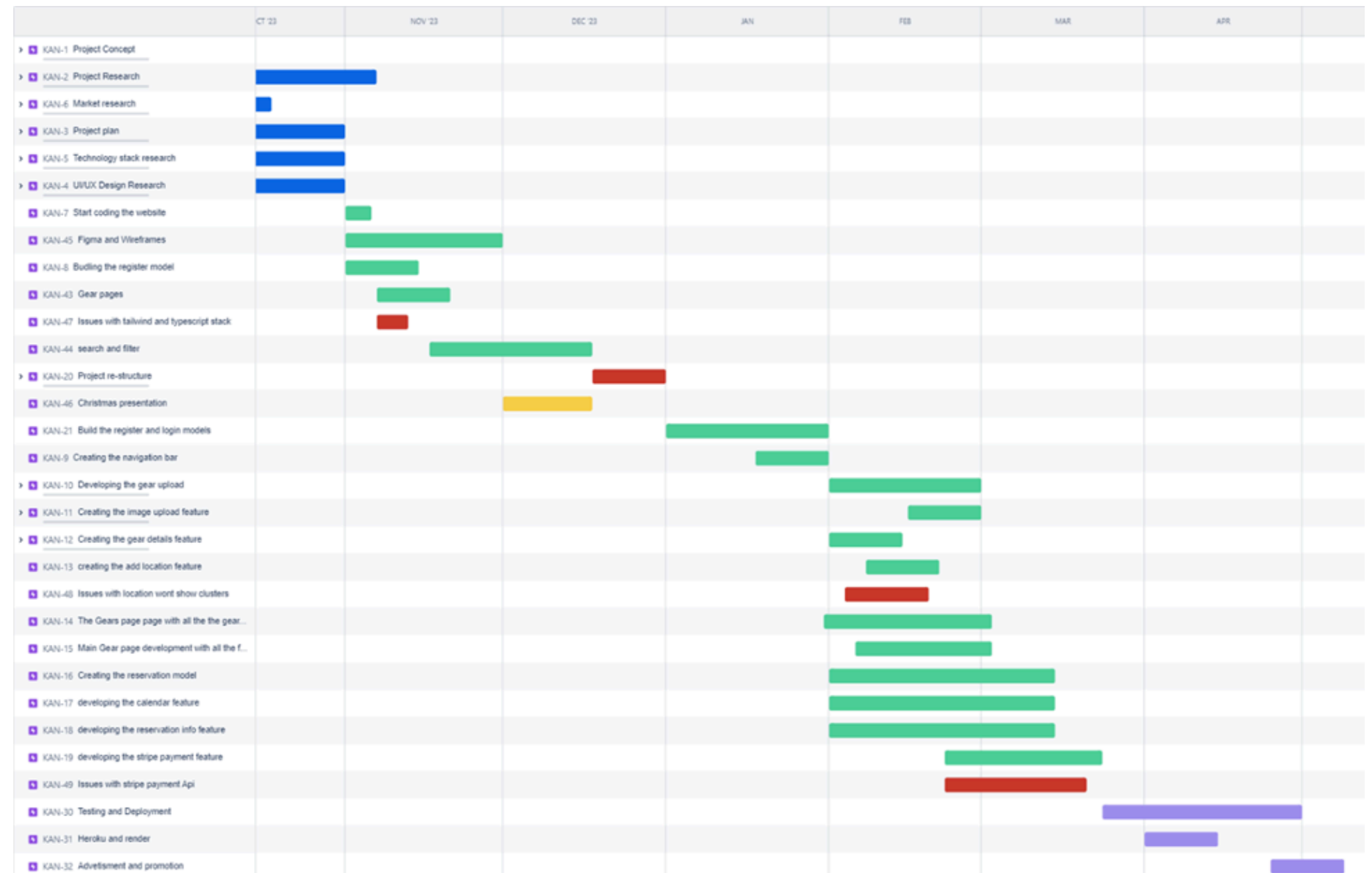


Organisation

Task priority

1. UI design
2. Navbar and Auth setup
3. Database setup
4. Registration and Login modals
5. Listing creation
6. Favourite functionality
7. Reservation / Calendar setup
8. Filtering
9. Stripe payment
10. Deployment

● Planning ● Development
● Deployment ● Major issues ● Minor issues



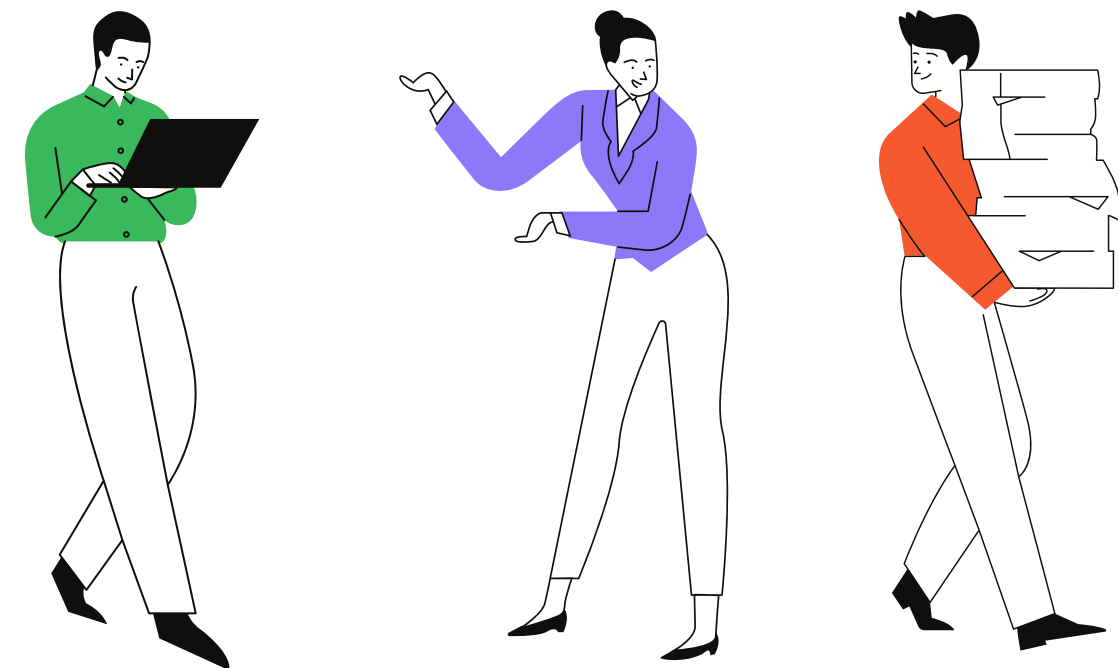
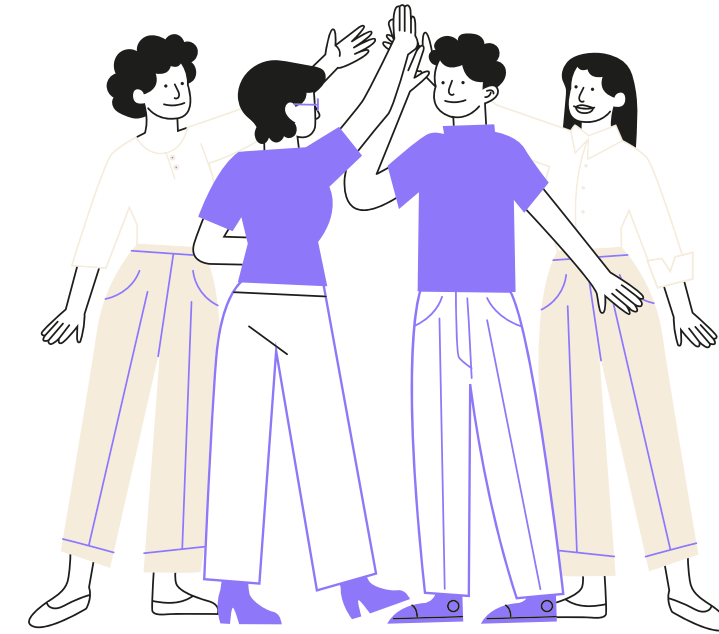
Engagement

Peers – Through out the academic semester for any help or questions

Lecturers – Communication with project supervisors, regular updates on progress, challenges, and proposed solutions.

Incorporated during the project:

- Self-directed study,
- Hands-on experimentation,
- Collaboration with mentors,



Demo