



Documentation

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Purpose

We were recently approached by a client; an owner of a freshly renovated aquatic centre, Azure Splash. Due to the high volume of patrons, the centre has had to implement mandatory reservations for each pool lane. There are currently two pools with a total of 6 lanes per pool. At the moment, the only way to reserve a lane is via phone or in-person as the facility does not have a website. This has led to multiple customers walking-in and unable to go for a swim, leaving them unsatisfied and resulting in customers visiting a competitor or worse yet, not continuing their patronage. Further, it was keeping staff tied to the phones in order to keep up with reservations, and preventing them from fulfilling their other duties.

The goal for this web application is to enable users to make a booking for available lanes in the allocated time slots. The slots are for half an hour, and each customer can reserve a maximum of two consecutive slots. This will allow customers to be guaranteed a lane, and for staff to be freed up with assisting

customers in the venue. In the future, they would like to expand their services by adding a sauna. As such, a 'coming soon' booking space for this will be displayed on the web application. This will also enable the centre to introduce other services, such as swimming classes in the future.

The web application will also promote the business by showing off the brand new facilities, as well as the competitive prices. It will also encourage users to create an account, to view availability and make bookings as this will be unavailable to users without an account. The overarching goal is to ensure that the pool is always booked, hence guaranteeing customers a lane when they turn up for a swim.

Functionality & Features

Browsing (non-member)

The user will be able to:

- View all the services available at the centre
- Send enquiries with the 'contact us' form
- View opening hours and contact details
- View pricing
- Create an account

Browsing (logged-member - Customer)

The user will be able to:

- View all the services available at the centre
- Send enquiries with the 'contact us' form
- View opening hours and all contact details
- View pricing
- View bookings page
- View lane availability
- Create/view/cancel their own bookings
- View own profile

Browsing (logged in member - Workers)

The user will be able to:

- View all the services available at the centre
- Send enquiries with the 'contact us' form
- View opening hours and contact details
- View pricing
- View bookings page
- View lane availability
- Create/view/cancel all bookings
- View all profiles
- Create new Customer profiles

Browsing (logged in member- Admin)

The user will be able to:

- View all the services available at the centre
- Send enquiries with the 'contact us' form
- View opening hours and contact details
- View/edit pricing
- View bookings page
- View/edit/delete lane availability
- Create/view/cancel all bookings
- View all profiles
- Create new profiles(admin, worker, customer)
- Create/edit/delete services

Target Audience

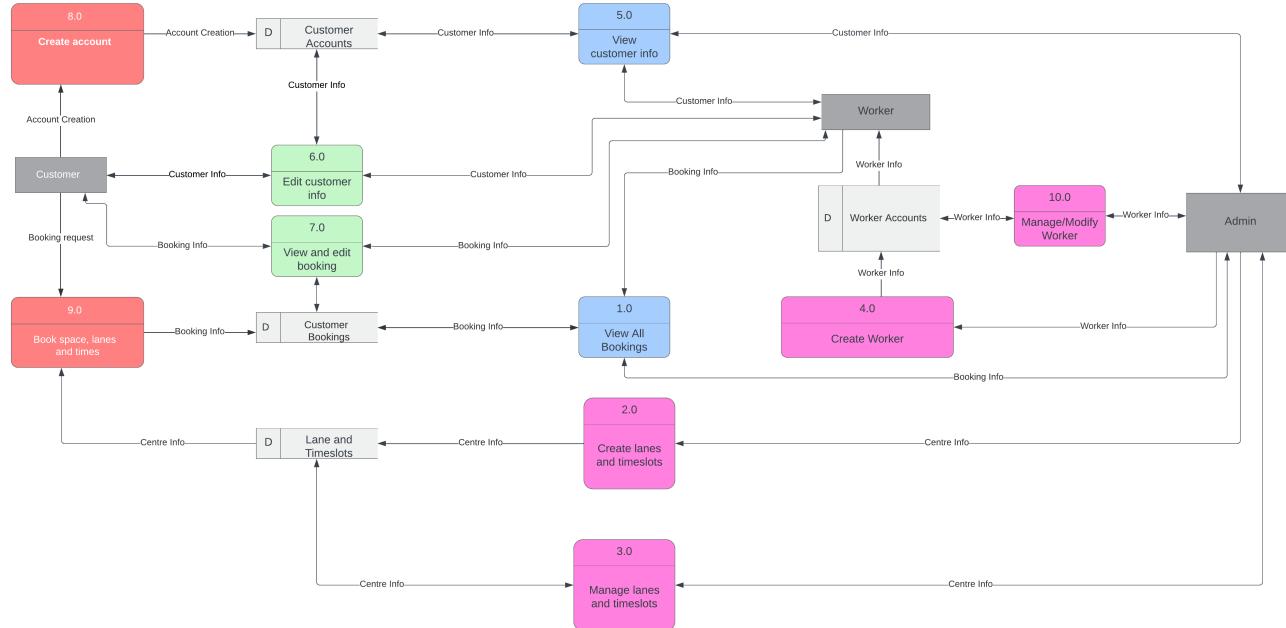
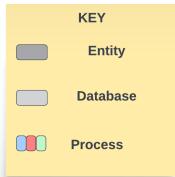
The application will be aimed at everyone that enjoys swimming of all experience levels, working or living in the local area. Further, there will be emphasis on future growth of the business and expansion of services that can be expected in the near future, such as swimming classes for all ages.

The application will be designed with user experience in mind, as the pools are expected to be used by people of all ages. This will mean that the application will cater to both tech-savvy users and those less familiar with technology.

Tech Stack

- **Frontend:** HTML5, CSS, REACT.JS, JavaScript
- **Backend:** Node, Express.JS
- **Database:** Mongo. Mongoose
- **Deployment:** Heroku (backend), Netlify (frontend)
- **Project Management Tools:** Discord, Trello
- **Utilities:** draw.io, Lucidchart, Figma
- **DevOps:** Github, VS Code

Data Flow Diagram



Data Descriptions

Customer Accounts

Variable	Description
_id	Customer ID
_date_created	Date account created
_Firstname	Customer first name
_Lastname	Customer last name
_password	Password
_email	Email
_dob	Date Of Birth
_prmadd	Primary address

Worker Accounts

Variable	Description
_id	Worker ID

Variable	Description
_date_created	Date account created
_Firstname	Worker first name
_Lastname	Worker last name
_password	Password
_email	Email
_dob	Date Of Birth
_prmadd	Primary address
_usrprv	User privileges
_role	Role/Position

Bookings

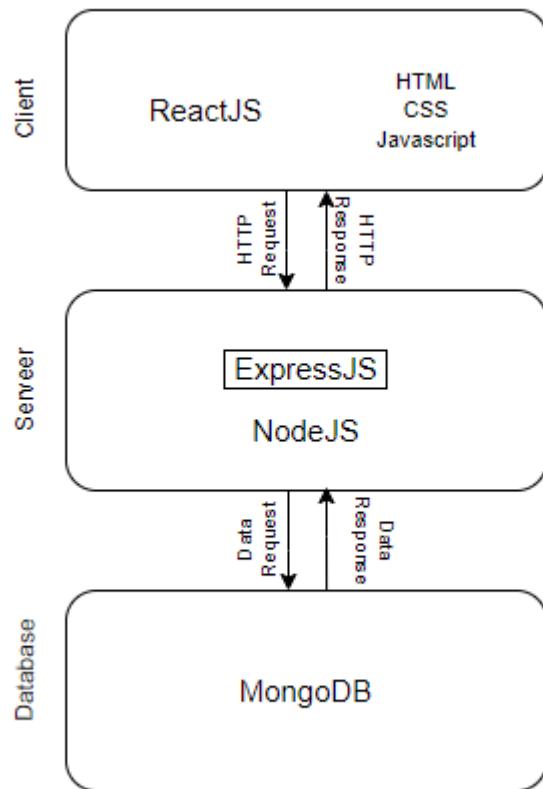
Variable	Description
_id	Booking ID
_date_created	Date booking created
_user_id	associated User ID
_tmslot	Timeslot for booking
_bkdate	Date Of Booking
_lane	Lane For Booking
_pool_id	pool ID

Lanes & Timeslots

Variable	Description
_outdr_id	Outdoor pool ID
_indr_id	Indoor pool ID
_date_created	Date account created
_tmslot	Timeslot for booking
_lane	Lane Booking
_bkdate	Date Of Booking

Application Architecture Diagram

The application architecture diagram displays the structure of the Azure Splash app, and the flow of data. The application is made up of three components: frontend, backend and database.



User Stories

Persona 1: Stacy

Background

Stacy is a 45 year-old manager at the aquatic centre. She has been tasked with overseeing operations at the facility, and ensuring that both customers and workers are satisfied.

Goals and Behaviour

Stacy would like for customers to stay informed on all matters regarding the facility, such as maintenance and services. Further, she would like to alter lanes or times available in the case of changes due to maintenance or public holidays etc. Next, she would like to view current and future bookings, to ensure that there are an appropriate number of staff to handle all required duties.

Admin

As an admin, I want to be able to view all bookings so that I may be prepared and organised for current and upcoming bookings.

As an admin, I want to block lanes and time slots for maintenance to ensure that the facility is able to undergo any required upkeep with minimal disruptions.

As an admin, I want to create and manage the bookings for additional spaces, so that I may expand the services offered to customers online.

As an admin, I want to be able to create time slots and lanes to effectively manage the availability of the aquatic centre.

Persona 2: Jean

Background

Jean is a 26 year-old avid swimmer, who works at an office from 9 - 5 p.m. She prefers to swim daily, typically in the early morning.

Goals and Behaviour

Jean would like to book lanes in advance, to ensure that she is able to complete her morning swim daily. Additionally, she would like the entire process to be seamless and flexible.

Customer

As a customer, I want to book a lane in a specific time slot to ensure that I am able to swim, regardless of the number of customers in the aquatic centre.

As a customer, I want to be able to view available times and lanes to ensure that there are no conflicts, whilst effectively choosing the best option.

As a customer, I would like to edit or delete my own bookings in the case of any changes in my schedule.

Persona 3: Tom

Background

Tom is a 30 year-old worker at the aquatic centre. He enjoys working there, but has noticed that the recent spike in customers has resulted in a number of people unable to swim. Further, this has resulted in a recent increase in bookings through the phone, and preventing staff from completing other duties.

Goals and Behaviour

Tom would like for customers to be able to view available lanes and time slots, and complete their own bookings instead of calling in to check with staff. He would also like to have an overview of all the current and future bookings, as well as unavailable times for lanes to stay informed.

Worker

As a worker, I want to delete and edit any booking to ensure that I'm able to assist customers with their requests.

As a worker, I would like to see available times and lanes to assist customers with their bookings.

As a worker, I would like to be able to see relevant information regarding maintenance so that I may provide warnings to customers and evacuate the areas if necessary.

Wireframes

Figma was used to create wireframes for this project. We decided to use image and full color instead of placeholder images. This will allow quicker approval from the client. After discussions with the owner of Azure Splash, we worked out that most of the users will be using a mobile device. With this in mind we decided to take a mobile first approach to the design.

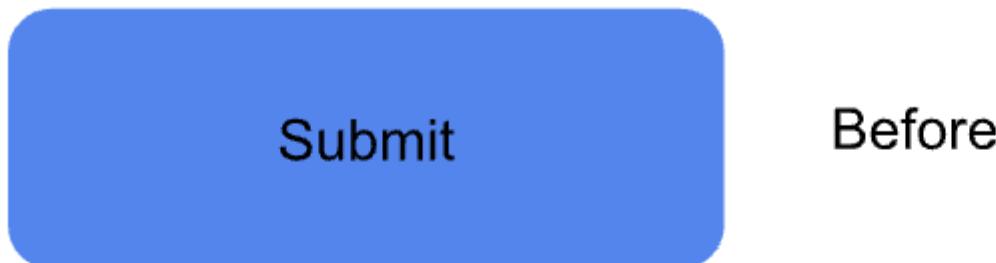
Design Features

Color Scheme



Buttons

The buttons will be designed with a slight rounded corner on a rectangle. The standard button will have Azure as a color with black text. Using OnHover the button will change to lighter color, text will be capitalized and white.



Before



On Hover

Nav Bar

The Nav Bar will be sticky at the top of the page making the menu accessible when scrolling the content on each page. The same color format then the buttons will be used on the Nav Bar. This will keep the site

looking uniform and helping the user navigate the site easier.



Mobile Design

Home & About Us Pages

A photograph showing three swimmers in a pool during a race. The swimmer on the left is performing a butterfly stroke, while the others are performing freestyle. The pool has red and white lane lines.

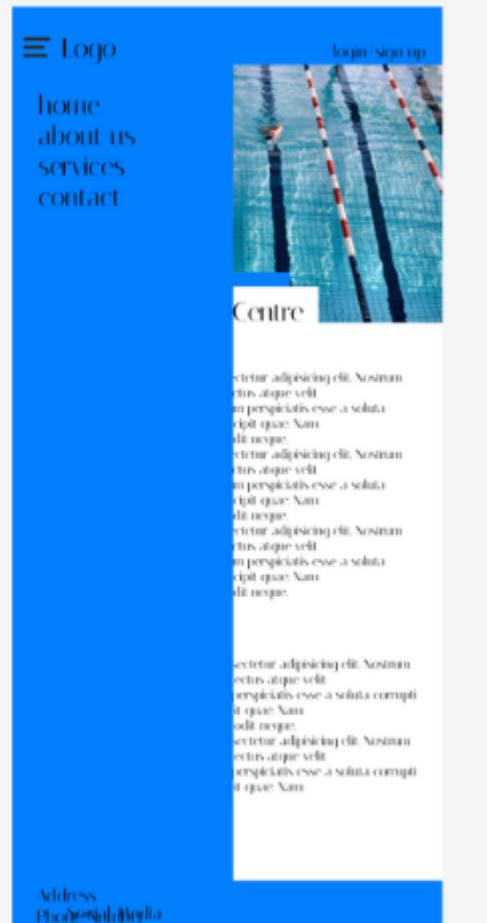
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Address
Phone Number



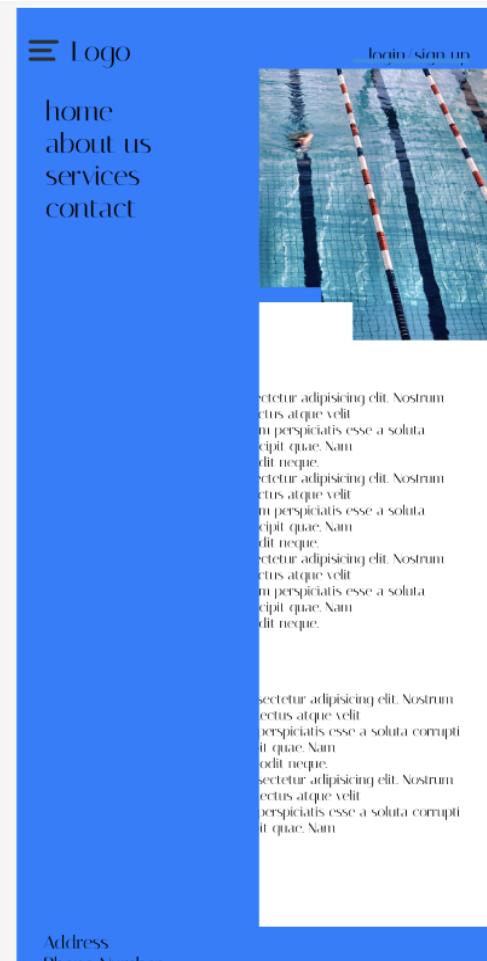
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Services & Contact Pages



Logo

[login](#) [sign up](#)



Services



Indoor Pool

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Address
Phone Number



≡ Logo

[login](#) [sign up](#)

[home](#)

[about us](#)

[services](#)

[contact](#)

Indoor Pool

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Outdoor Pool

Address

Phone Number

A photograph showing several swimmers in a pool, positioned at the top of the page above the main content area.

Logo

[login](#) / [sign up](#)

Contact

Address

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Office Hours

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Contact Us

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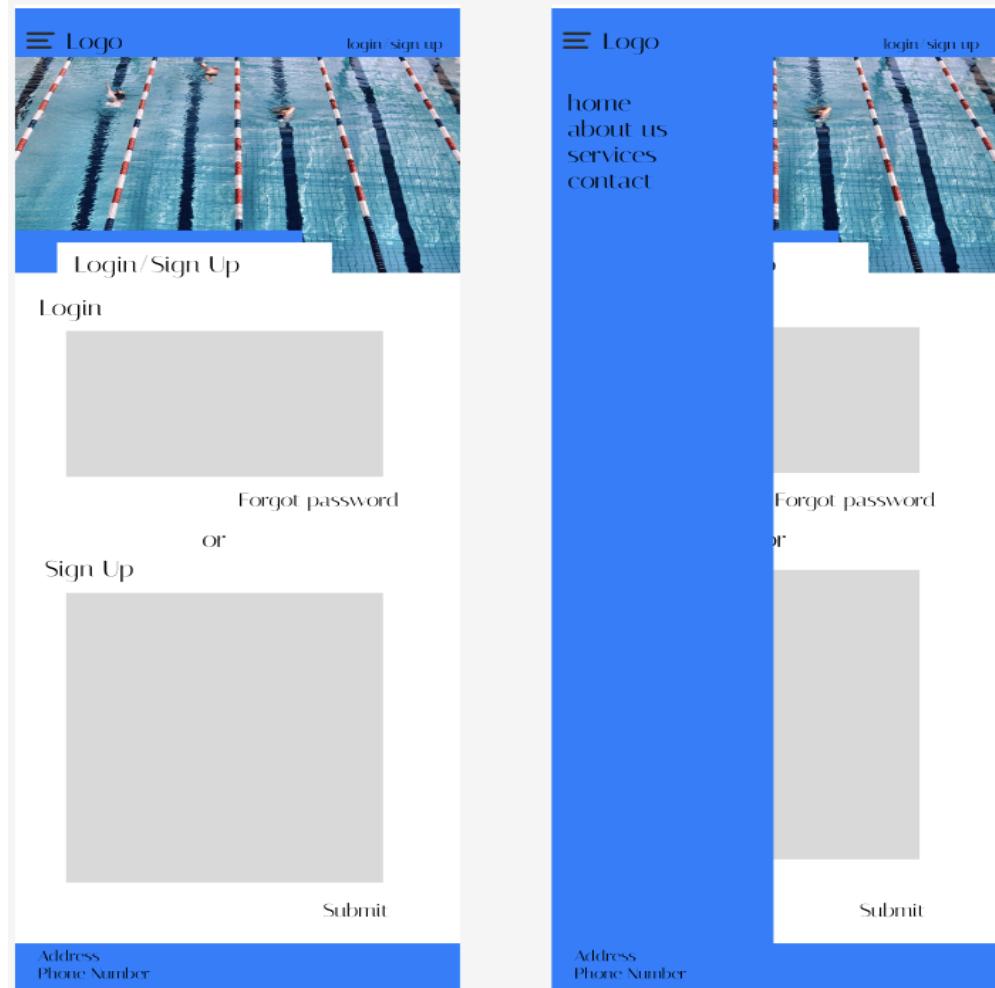
Phone Number

 **Logo** [login](#) [sign up](#)

[home](#)
[about us](#)
[services](#)
[contact](#)



Login & Register Pages



Bookings Pages

The screenshots illustrate a mobile application interface for booking swimming lanes, featuring a header with a logo and logout button, and a footer with address and phone number fields.

Booking Options:

- Lane:** Shows a grid of 12 lane slots, each with a question mark icon. A "Done" button is at the bottom.
- Indoor Pool:** Shows a photo of people in an indoor pool.
- Sauna:** Shows a photo of a sauna interior.
- Outdoor Pool:** Shows a photo of an outdoor swimming pool at dusk.
- Bookings:** Shows a photo of swimmers in a pool.

Date Selection:

- A calendar for September 2021 is displayed, with the 19th highlighted in red.
- A "Continue" button is at the bottom.

Time Selection:

- A grid of 12 time slots, each labeled with three question marks (e.g., ?? am, ?? pm).
- A "Continue" button is at the bottom.

Information Pages:

- Lane:** Shows a photo of swimmers in a pool.
- Thank you for booking with us!**: A message page with placeholder text.
- Footer:** Links to home, profile, about us, services, and contact.

Desktop & Tablet

Home & About Us Pages

A wide-angle photograph of a swimming pool. Several swimmers are visible in the water, performing various strokes. The pool features red and white lane lines. The background shows the tiled floor of the pool.

Azure Aquatic Centre

Address
Phone Number

Social Media

Address
Phone Number

Social Media

A wide-angle photograph of an indoor swimming pool. Lane lines with red and white vertical stripes divide the pool into lanes. Several swimmers are performing the butterfly stroke, their bodies submerged in the clear blue water. The background shows the tiled walls of the pool.

About Us

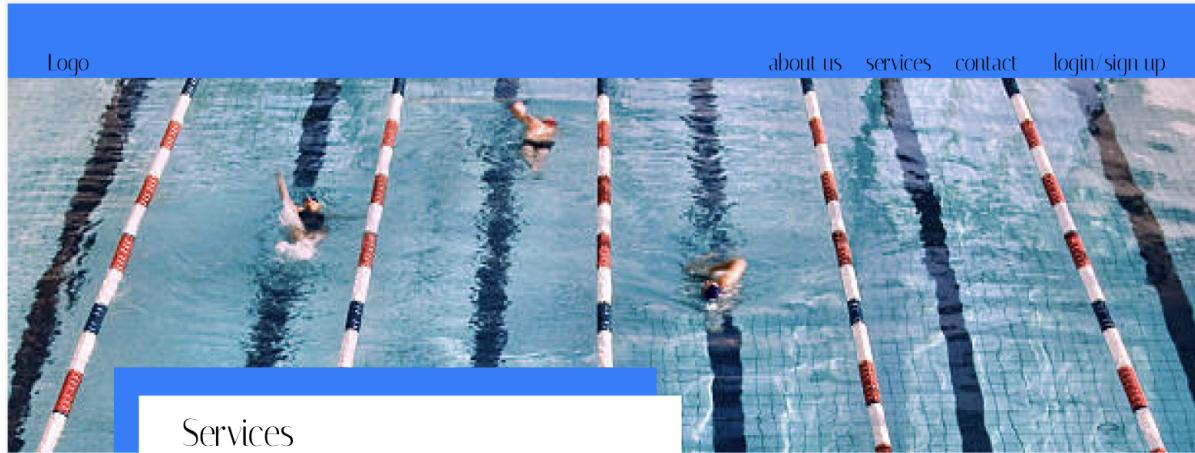
[about us](#) [services](#) [contact](#) [login/sign up](#)

Address Social Media
Phone Number

Address
Phone Number

Social Media

Services & Contact Pages



Indoor Pool



Sauna



Outdoor Pool



Address

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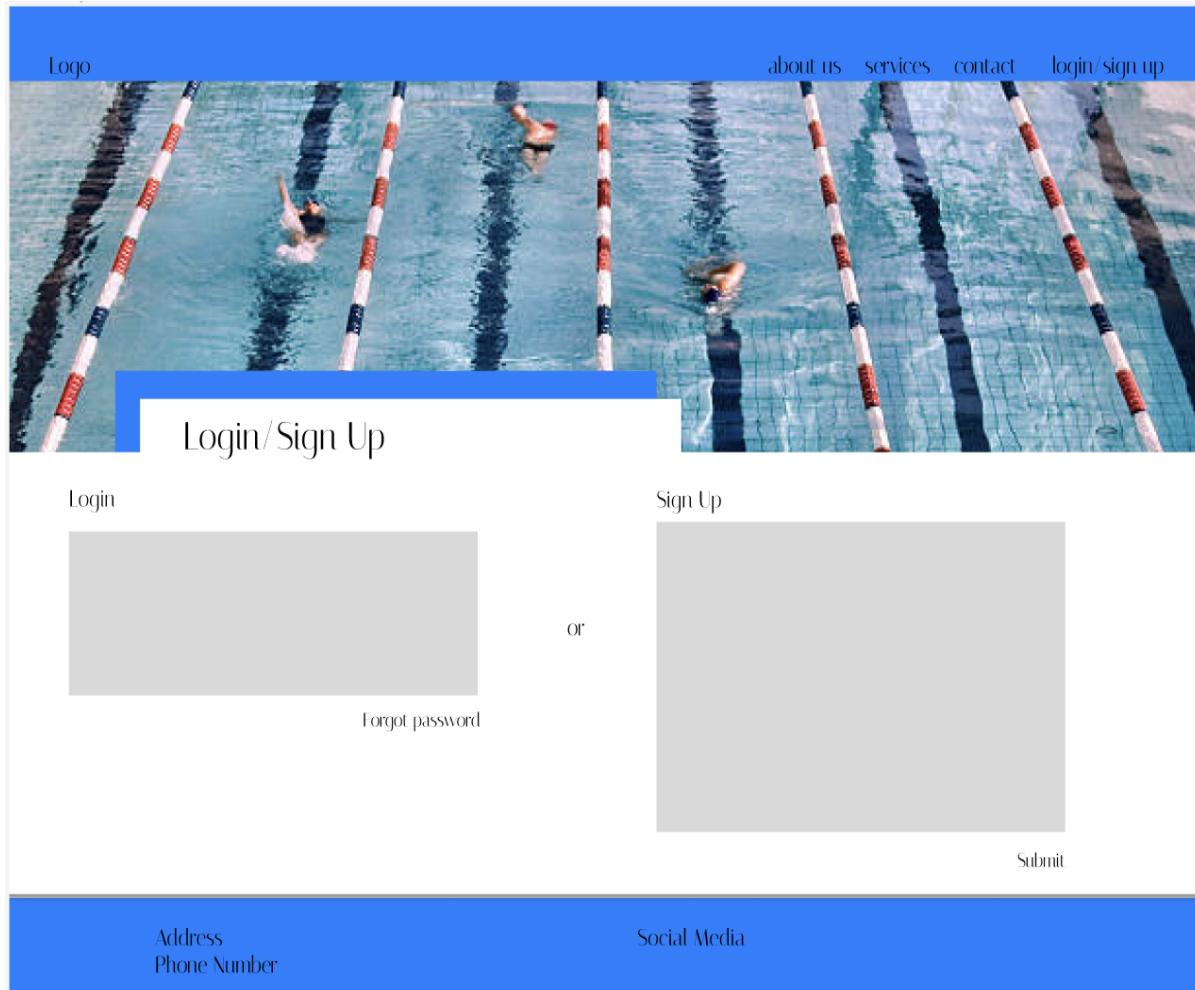
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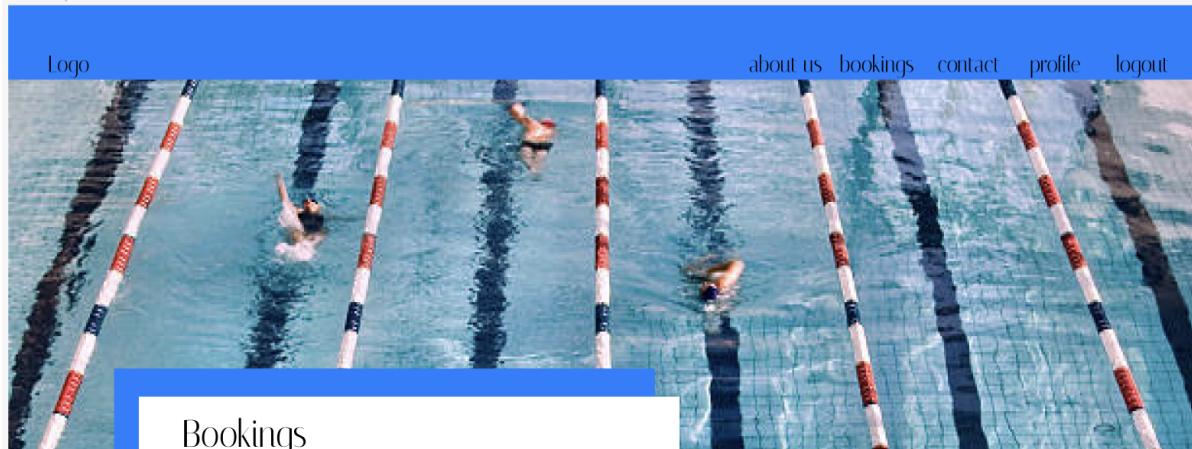
Contact Us



Login & Register Pages



Bookings Pages



Logo about us bookings contact profile logout

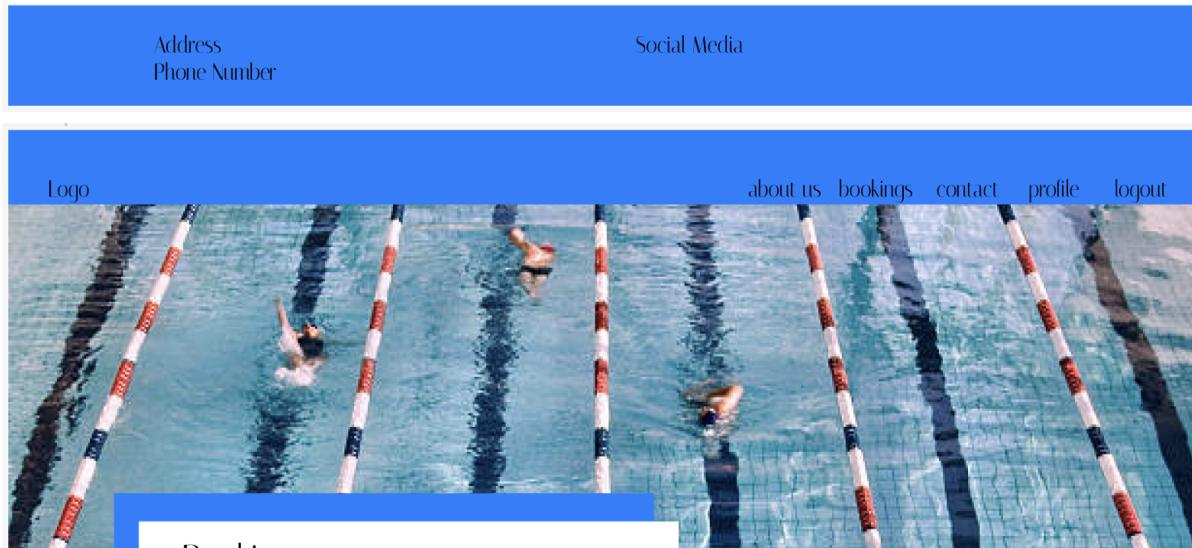
Bookings

Date

< September 2021 >

SUN	MON	TUE	WED	THU	FRI	SAT
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				

Continue



Address Social Media
Phone Number

Logo about us bookings contact profile logout

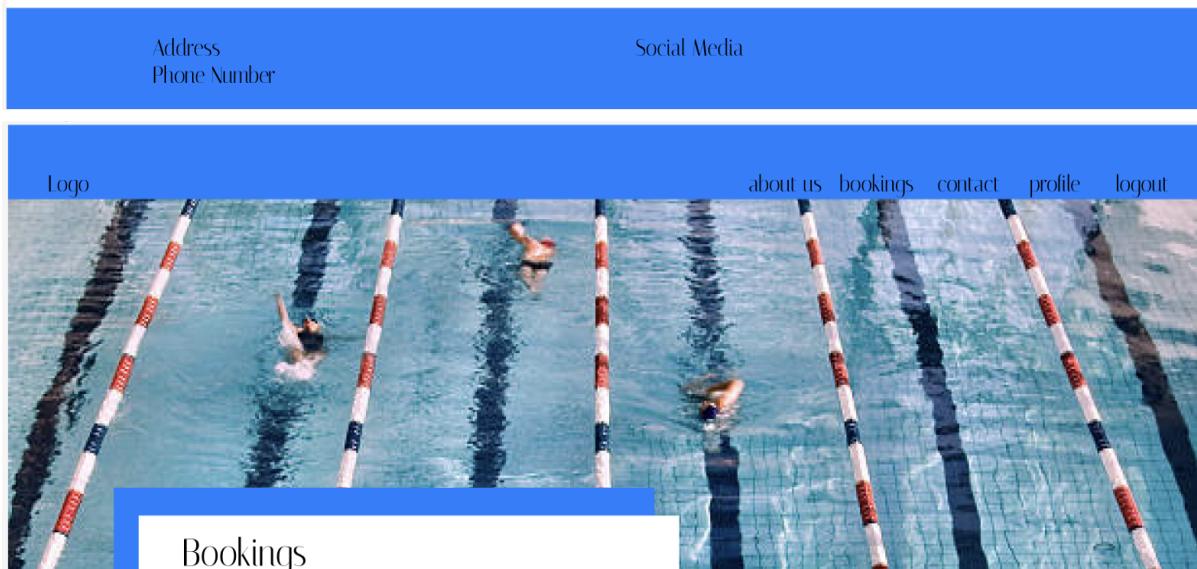
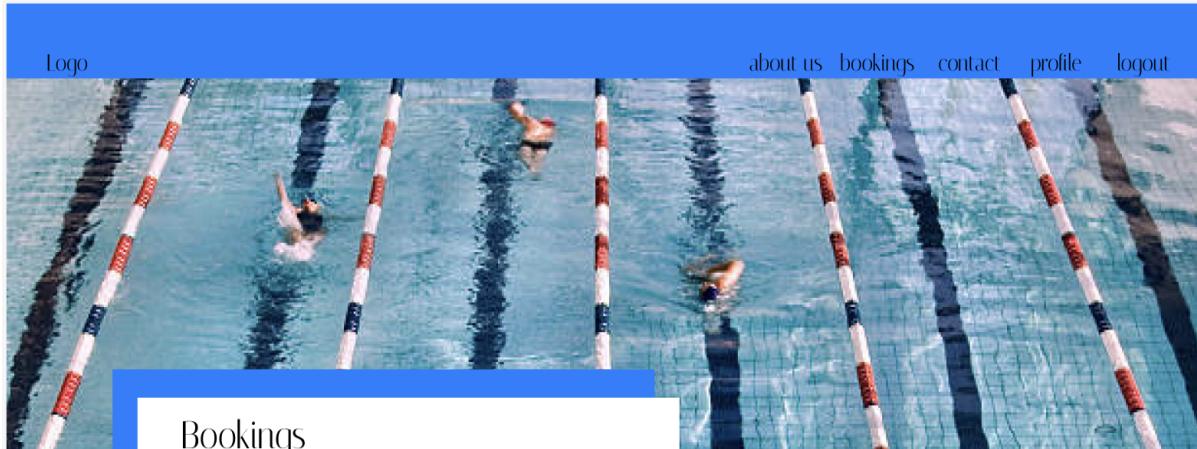
Bookings

Time

???	???	???	???
???	???	???	???
???	???	???	???

Continue

Address Social Media
Phone Number



Project Management

The following software was used for project management and planning:

- Discord: was used to communicate with each other, text, voice and screen sharing
- Google Docs: used to share ideas and images and other information before loading onto readme.md file
- Trello: for agile planning. Cards and lists were created with the tasks that needed to be completed with due dates. Questions, comments and feedback were also placed on the cards. The requirements were put into cards and then split to task for the team to complete.

The full trello board can be viewed here: [Trello Board](#)

The Trello board is titled "Azure Splash". It features five columns: "To Do", "In Progress", "Next-up", "Completed", and "Questions".

To Do:

- Description of your website
- Dataflow Diagram
- Application Architecture Diagram
- User Stories
- Wireframes
- + Add a card

In Progress:

- + Add a card

Next-up:

- + Add a card

Completed:

- + Add a card

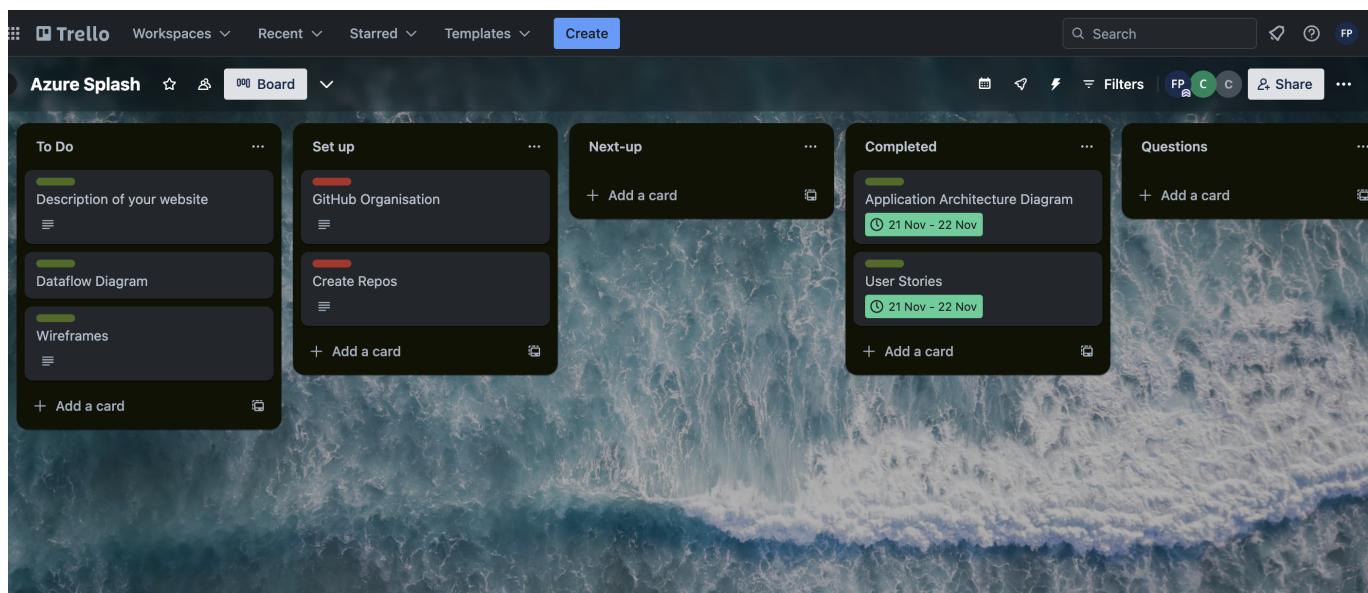
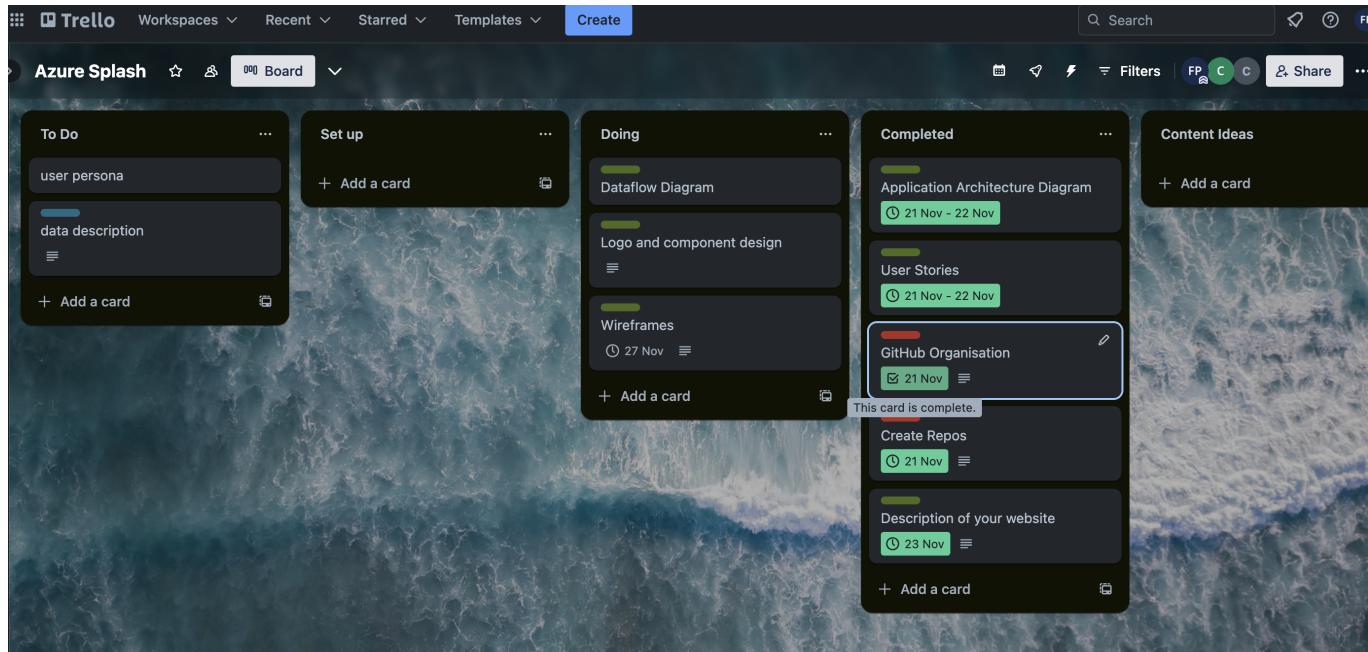
Questions:

- + Add a card

After Update:

The "In Progress" column now contains two cards:

- GitHub Organisation
- Create Repos



A screenshot of a Trello card editor. The card title is "Wireframes" and it is in the "Doing" list. The card description contains the following text:

wireframes for multiple screen sizes and pages

- desktop
- tablet
- phone

The card has a due date of "27 Nov at 15:00". On the right side, there are various action buttons: Suggested (Join), Add to card (Members, Labels, Checklist, Dates, Attachment, Cover, Custom Fields), Power-Ups (+ Add Power-Ups), and Automation (+ Add button). At the bottom, there are Save, Cancel, and Formatting help buttons.

A screenshot of a Trello board titled "Azure Splash". The board has five columns: To Do, Set up, Doing, Completed, and Content Ideas. The Doing column contains the following cards:

- Dataflow Diagram
- Logo and component design
- Wireframes

The board also includes a sidebar with a search bar and filter options.

The screenshot shows a Trello board titled "Azure Splash" with the following structure:

- To Do**: Contains a card "+ Add a card".
- Set up**: Contains a card "+ Add a card".
- Doing**: Contains cards for "Dataflow Diagram", "Wireframes", and "Description of your website" (due 23 Nov). Each card has a "Edit" icon.
- Completed**: Contains cards for "Application Architecture Diagram" (due 21 Nov - 22 Nov), "User Stories" (due 21 Nov - 22 Nov), "GitHub Organisation" (due 21 Nov), and "Create Repos" (due 21 Nov). Each card has a "Edit" icon.

A modal window is open for the "Description of your website" card, showing the following details:

- Labels**: Planning
- Notifications**: Watching
- Description**:
 - Document:
 - logo design
 - color scheme
 - fonts
 - button design
- Activity**:
 - Write a comment... (Fabian Perre just now)

We decided that a blue and white palate is the way to move forward.
"Azure Blue" was the starting point.
- Suggested**:
 - Join
 - Add to card
 - Members
 - Labels
 - Checklist
 - Dates
 - Attachment
 - Cover
 - Custom Fields
- Power-Ups**:
 - + Add Power-Ups
- Automation**:
 - + Add button
- Actions**:
 - Edit · Delete

This board is set to public. You can change its visibility at any time. [Learn more here](#)

Azure Splash

To Do

Presentation (30 Nov)

+ Add a card

Set up

+ Add a card

Doing

+ Add a card

Completed

30 Nov

User Stories (21 Nov - 22 Nov)

User Persona (27 Nov)

Dataflow Diagram

Wireframes (27 Nov)

Logo and component design

+ Add a card

Content Ideas

+ Add a card

Board Share ...

Search

Filters FP C C