

# Tellescope summer 2022

internship overview



# Project Timeline

## FIRST 2 WEEKS

- INTRO TO TYPESCRIPT AND REACT-DOC, NPM , STORYBOOK, MATERIAL UI

## MIDDLE 3 WEEKS

- ACTIVE WORKING IN STORYBOOK
- ACTIVE WORK IN R2D CODEBASE
- BEGIN TALKING TO ENDUSERS

## LAST 2 WEEKS

- INTRODUCTION AND INTEGRATION OF VICTORY CHARTING COMPONENT LIBRARY
- ACTIVE WORK ON R2D CODEBASE

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# Project Overview

Work for Reversing Type 2 diabetes: R2D, with Sebastian to create a responsive webapp that supports

- patient monitoring
- vital status checking
- goal setting
- program journeys and more



 Title Page

Timeline

Role

X

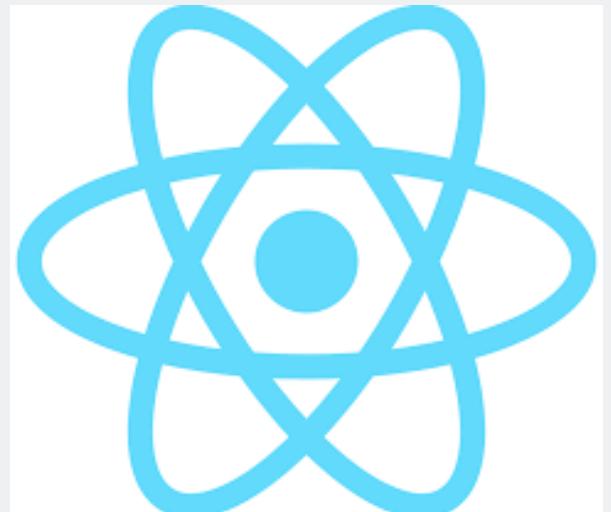
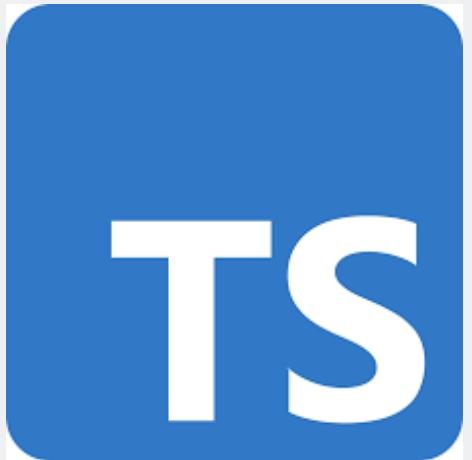
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# My Role

Primarily develop on the  
**Front End** of the R2D webapp

- create custom components overriding mui library components
- test components and edge-cases in Storybook
- integrate components into the R2D webapp component library
- integrate components into the R2D webapp
- Contribute directly to the R2D webapp frontend development



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## FIRST 2 WEEKS

### Onboarding + introduction

INTRO TO TYPESCRIPT AND REACT-DOC, NPM ,  
STORYBOOK, MATERIAL UI

not very exciting alot of stack overflow and  
react doc tutorials compiled my first 2 weeks  
experience on this notion board

## OUTCOMES

better understanding of tools to create mock  
components in storybook, using typescript,  
react-app

[Link to week 1-2 resource page  
\(notion\)](#)

The screenshot shows a Notion page titled "Tic Tac Toe" by Cecelia Crumlish. The page contains a code editor with JS (Babel) and HTML/CSS tabs. The JS code defines a Square component and a Board class extending React.Component. The Board class handles clicks and updates a state variable 'squares'. A 3x3 grid is displayed below the code, and a message says "Next player: X". A button labeled "Go to game start" is present.

```
function Square(props) {
  return(
    <button className="square" onClick={props.onClick}>
      {props.value}
    </button>
  );
}

class Board extends React.Component {
  handleClick(i) {
    const history = this.state.history;
    const current = history[history.length -1];
    const squares = this.state.squares.slice();
    if (calculateWinner(squares) || squares[i]) {
      return;
    }
    squares[i] = this.state.xIsNext ? 'X' : 'O';
    this.setState({
      history: history.concat([squares]),
      xIsNext: !this.state.xIsNext
    });
  }

  renderSquare(i) {
    return (
      <Square value={squares[i]} onClick={()=>this.handleClick(i)} />
    );
  }

  render() {
    const status = this.state.history.length === 1 ? 'New Game' : 'Play Again?';

    return (
      <div>
        <h1>Tic Tac Toe</h1>
        <div>
          <p>{status}</p>
          <button onClick={this.startNewGame}>Play Again?</button>
        </div>
        <div>
          <table border="1">
            <tbody>
              <tr><td></td><td></td><td></td></tr>
              <tr><td></td><td></td><td></td></tr>
              <tr><td></td><td></td><td></td></tr>
            </tbody>
          </table>
        </div>
      </div>
    );
  }
}
```

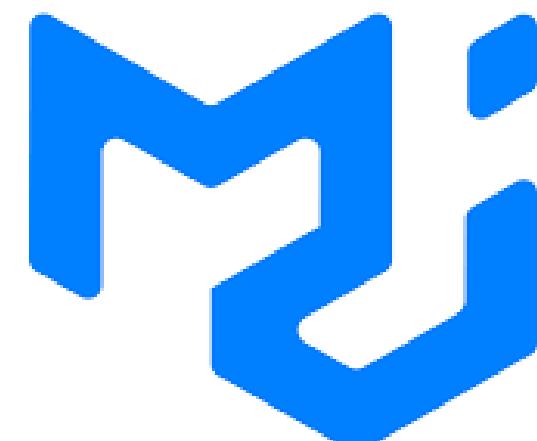
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## MIDDLE 3 WEEKS

1. ACTIVE WORKING IN STORYBOOK
2. ACTIVE WORK IN R2D CODEBASE
3. BEGIN TALKING TO ENDUSERS



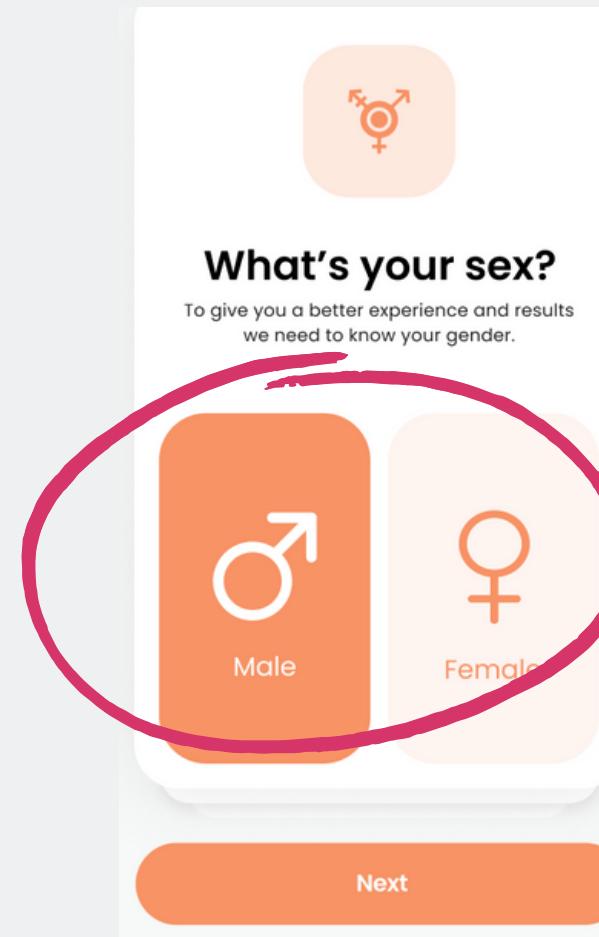
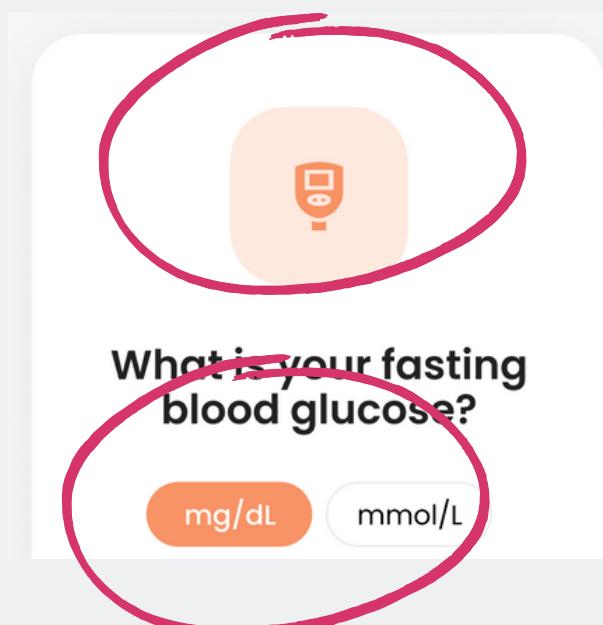
# Storyboard



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## 1. CREATE AND DEMO COMPONENTS IN STORYBOOK

- extended and customized material components to create custom components using the R2D figma boards, as reference





Insert your topic here

# DEMO OF STORYBOOK WORK

The screenshot shows a browser window displaying a Storybook component. The component is a button with the text "Secondary". The browser's address bar shows the URL `localhost:6006/?path=/story/button--none&args=color:secondary`. The Storybook interface on the left lists various components under categories like Button, Checkbox, ImgTxt, LogbookLevelBar, LogbookLine, OutlineCheckbox, Progress, and others. The "None" button variant is selected. A modal dialog in the center displays an error message: "Cannot read properties of undefined (reading 'dark')". Below the error message, a stack trace is shown:

```
TypeError: Cannot read properties of undefined (reading 'dark')
    at push.../node_modules/@mui/material/Button/Button.js.Object.ownerState.ownerState
    (http://localhost:6006/vendors-main.iframe.bundle.js:4834:72)
    at transformedStyleArg (http://localhost:6006/vendors-main.iframe.bundle.js:20573:18)
    at handleInterpolation (http://localhost:6006/vendors-main.iframe.bundle.js:1644:24)
    at serializeStyles (http://localhost:6006/vendors-main.iframe.bundle.js:1769:15)
    at http://localhost:6006/vendors-main.iframe.bundle.js:2140:106
    at http://localhost:6006/vendors-main.iframe.bundle.js:892:12
    at renderWithHooks (http://localhost:6006/vendors-main.iframe.bundle.js:118334:18)
    at updateForwardRef (http://localhost:6006/vendors-main.iframe.bundle.js:121250:20)
    at beginWork (http://localhost:6006/vendors-main.iframe.bundle.js:123660:16)
    at beginWork$1 (http://localhost:6006/vendors-main.iframe.bundle.js:129450:14)
```

Below the error modal, there is a table titled "Controls (2)" with two rows:

Name	Control
roundedness	none
color	secondary

← → Q Insert your topic here

## 2. INTEGRATION OF COMPONENTS IN A

What is your fasting blood glucose?

mg/dL mmol/L

What's your sex?

Male Female

Next

Forgot Password

in app integration

localhost:4000/settings

### Settings

#### Your Profile

You can update this information at any time

First Name

Last Name

Email

c@tufts.edu

Phone

UPDATE INFO

Forum Log Book Chat Settings

← → Q Insert your topic here

## 2-3. ACTIVE WORK IN R2D CODEBASE + talking to endusers

Worked on  
added toggle feature to checkbox component  
and edit what is saved in backend

Question 3/8

What is your fasting blood glucose?

99 mmol/l

mmol/l  
ml/dl  
N/A

BACK NEXT

Question 4/8

What is your most recent A1c level?

99 %

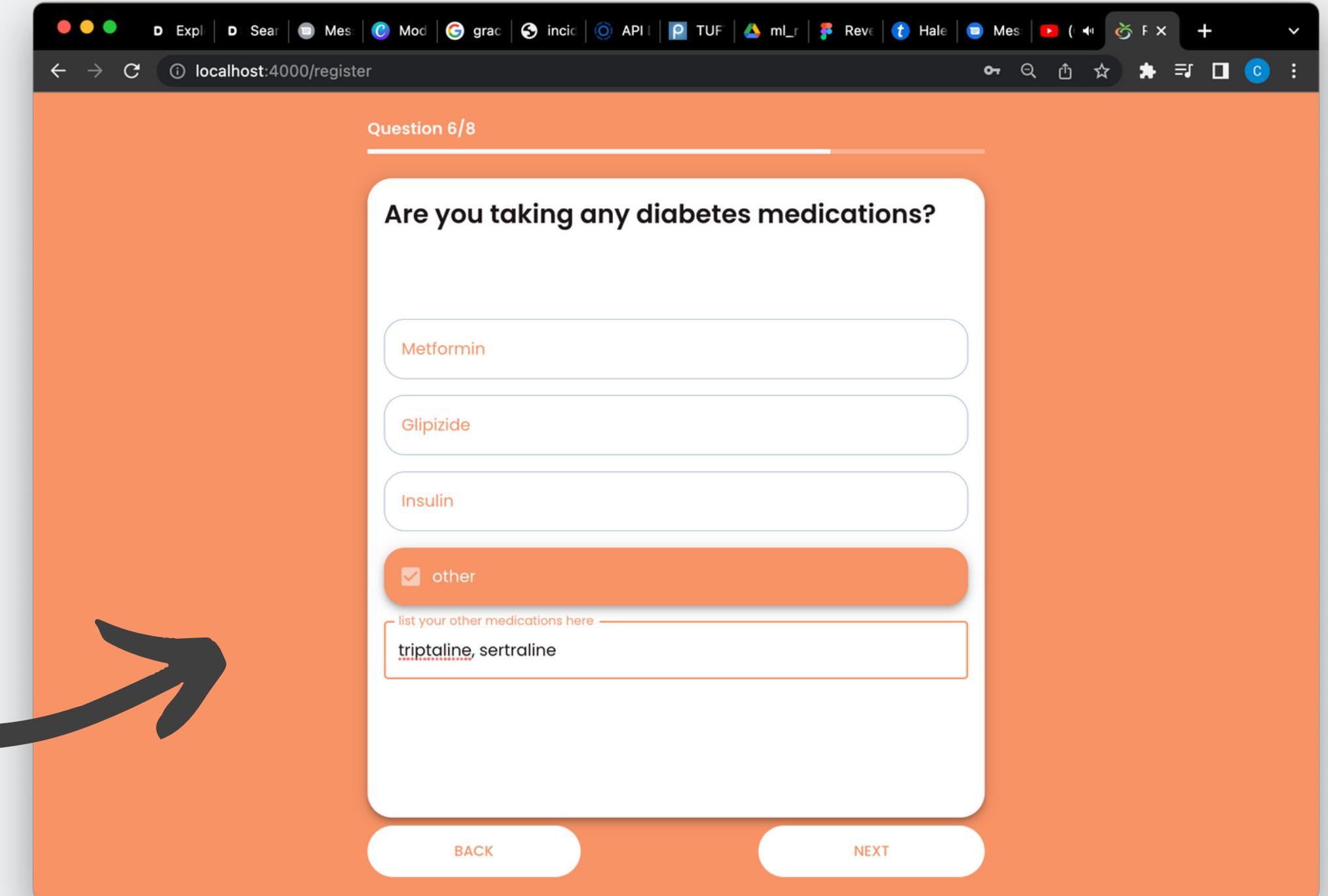
%  
N/A

BACK NEXT

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## 2-3. WORK IN R2D CODEBASE + talking to endusers

edited toggle feature to medication options menu, adjusted form input data, and user information to add for additional medications, when user clicks 'other' checkbox



localhost:4000/register

Question 6/8

Are you taking any diabetes medications?

Metformin

Glipizide

Insulin

other

list your other medications here

triprtaline, sertraline

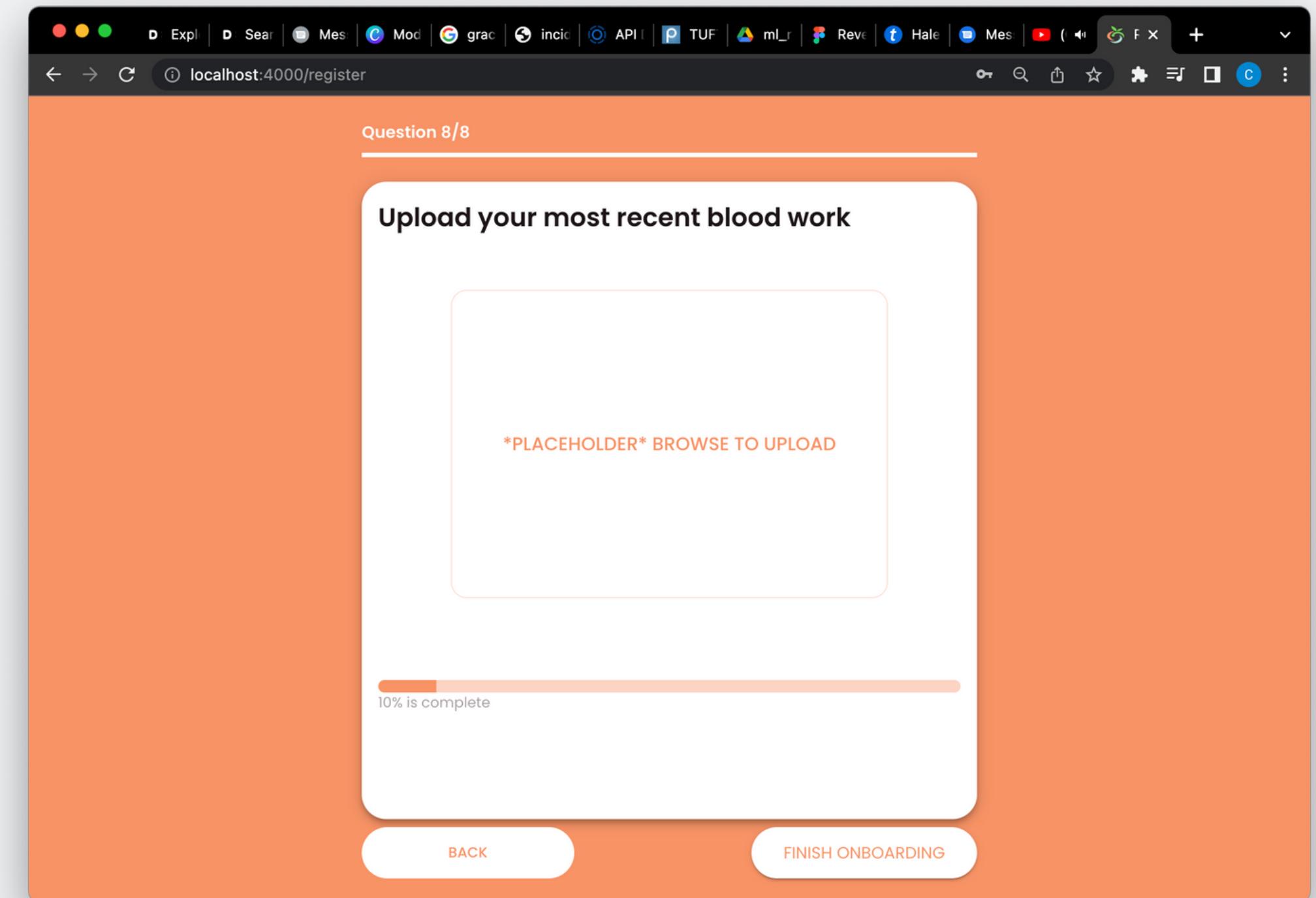
BACK

NEXT

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## 2-3. ACTIVE WORK IN R2D CODEBASE + talking to endusers

Create new page: to take user paperwork during Onboarding





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## FINAL 2 WEEKS

### 1. INTRODUCTION AND INTEGRATION OF VICTORY CHARTING COMPONENT LIBRARY

#### 1. ACTIVE WORK ON R2D CODEBASE



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## INTEGRATION WITH VICTORY

# 1. INTRODUCTION AND INTEGRATION OF VICTORY CHARTING COMPONENT LIBRARY

The screenshot shows the 'VictoryBar' component documentation page. It features a sidebar with navigation links like 'INTRODUCTION', 'SUPPORT', 'GUIDES', and 'DOCUMENTATION'. The main content area displays a 'LIVE PREVIEW' of a bar chart with red bars at x-coordinates 1.0, 2.0, 3.0, 4.0, and 5.0, each reaching heights of approximately 2, 3, 5, 4, and 6 respectively. Below the preview is an 'EDITABLE SOURCE' code block:

```
<VictoryChart
  theme={VictoryTheme.material}
  domainPadding={10}
>
  <VictoryBar
    style={{ data: { fill: "#c43a31" } }}
    data={sampleData}
  />
</VictoryChart>
```

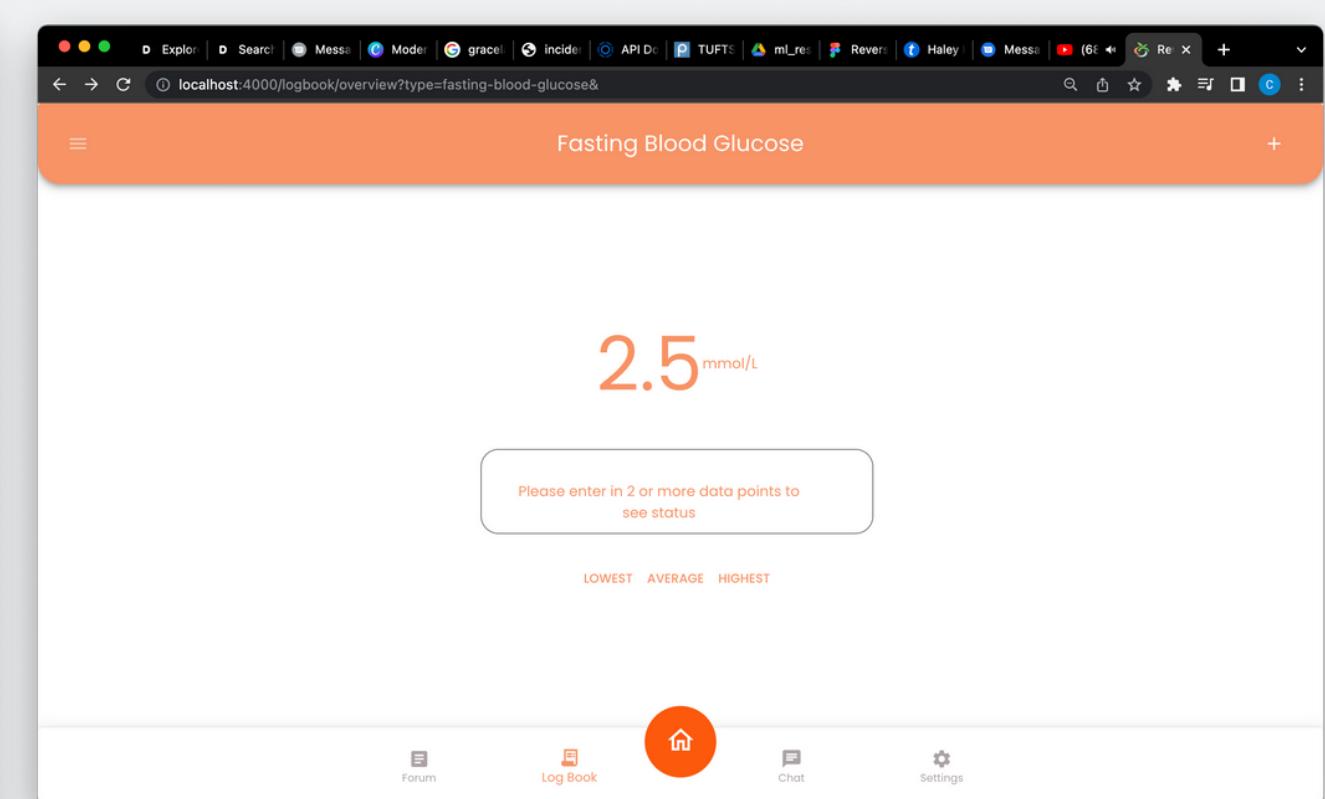
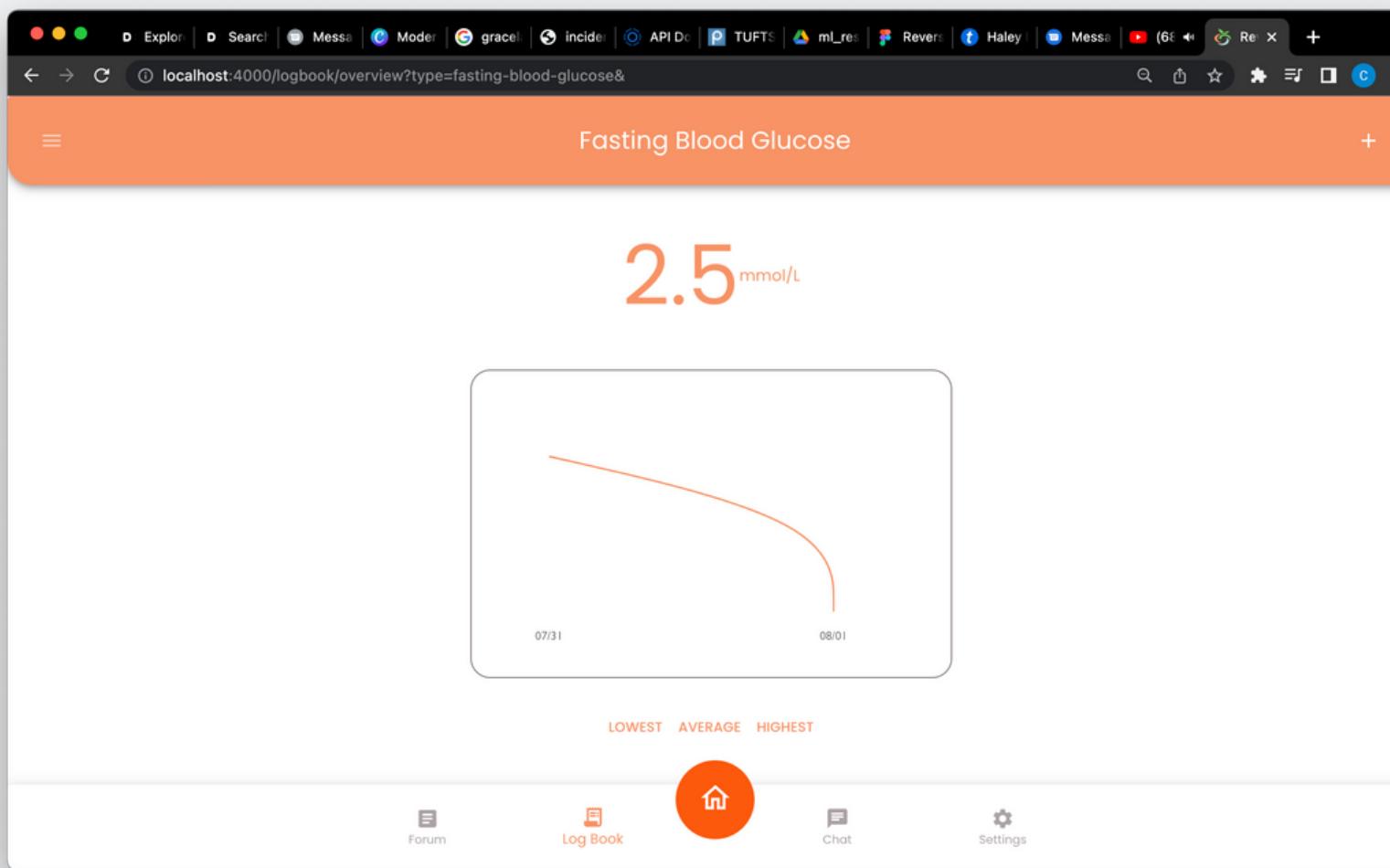
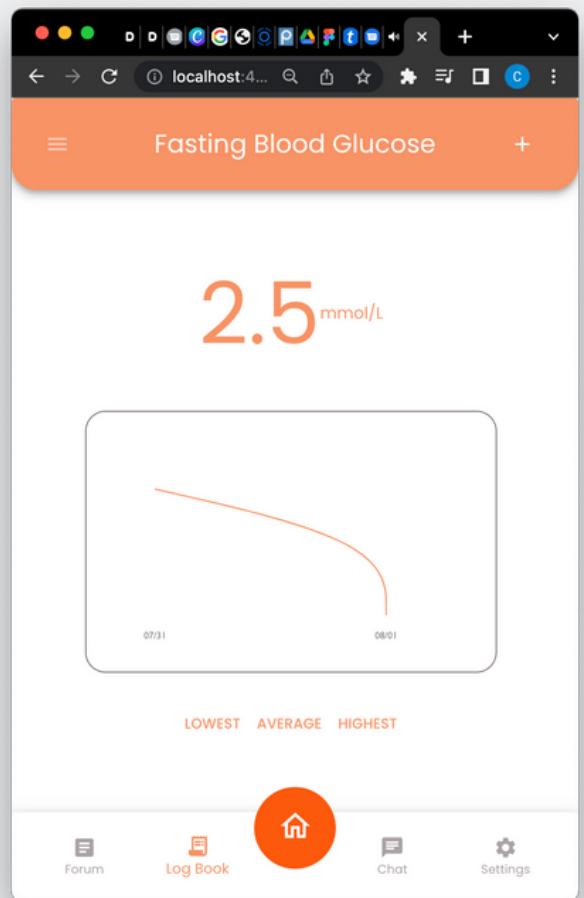
The screenshot shows the 'VictoryLine' component documentation page. It has a similar structure with a sidebar and live preview. The live preview shows a single red line connecting points (1, 2), (2, 3), (3, 5), (4, 4), and (5, 7). The editable source code is as follows:

```
<VictoryChart
  theme={VictoryTheme.material}
>
  <VictoryLine
    style={{
      stroke: "#c43a31",
      parent: { border: "1px solid #ccc" }
    }}
    data={[
      { x: 1, y: 2 },
      { x: 2, y: 3 },
      { x: 3, y: 5 },
      { x: 4, y: 4 },
      { x: 5, y: 7 }
    ]}
  />
</VictoryChart>
```

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## INTEGRATION WITH VICTORY

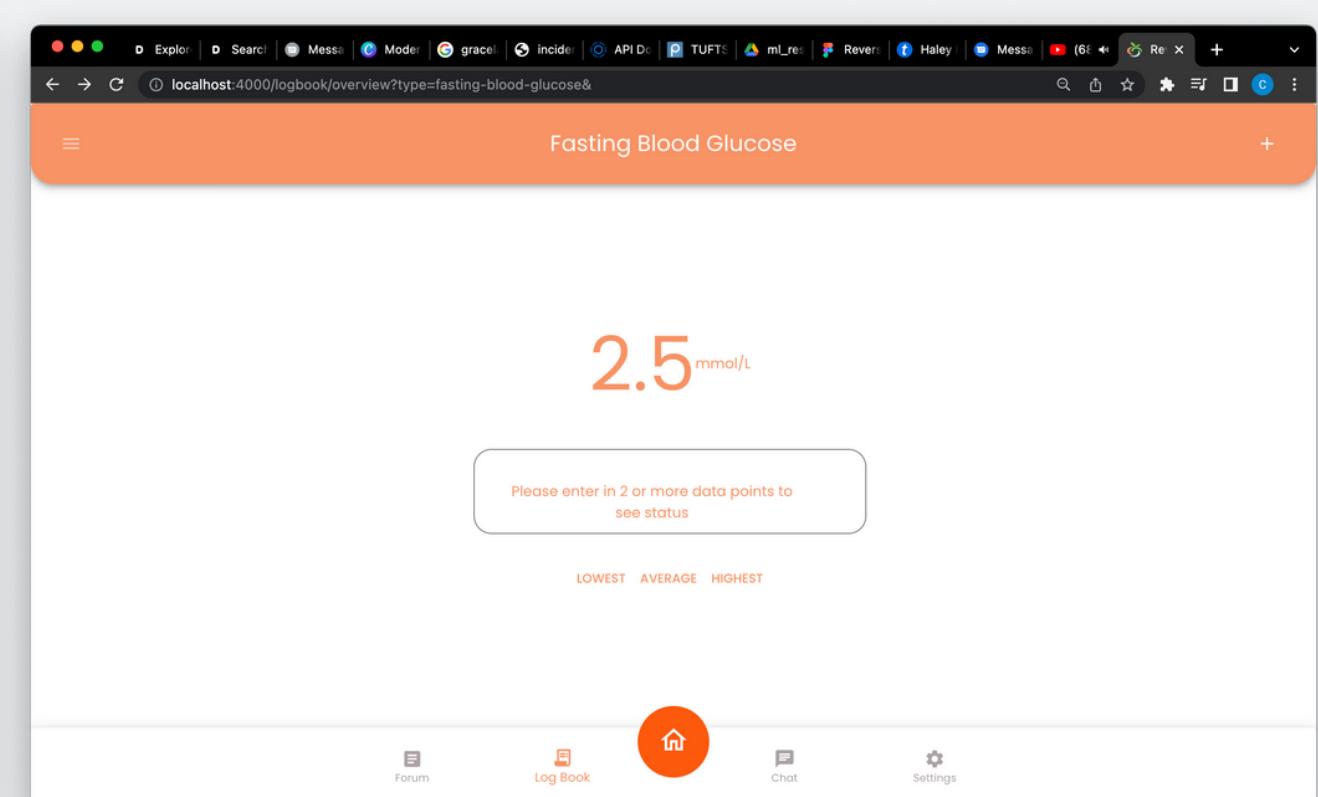
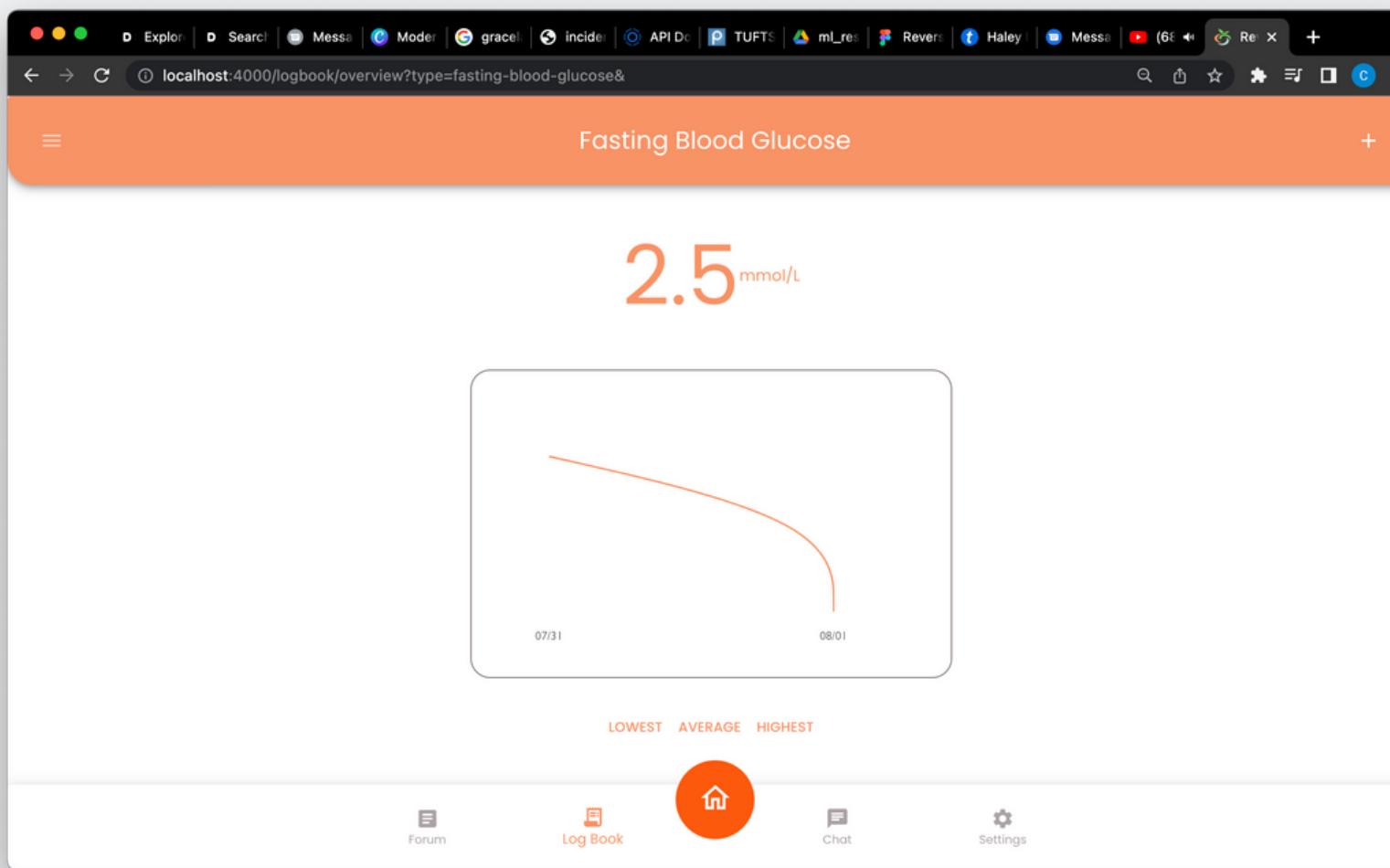
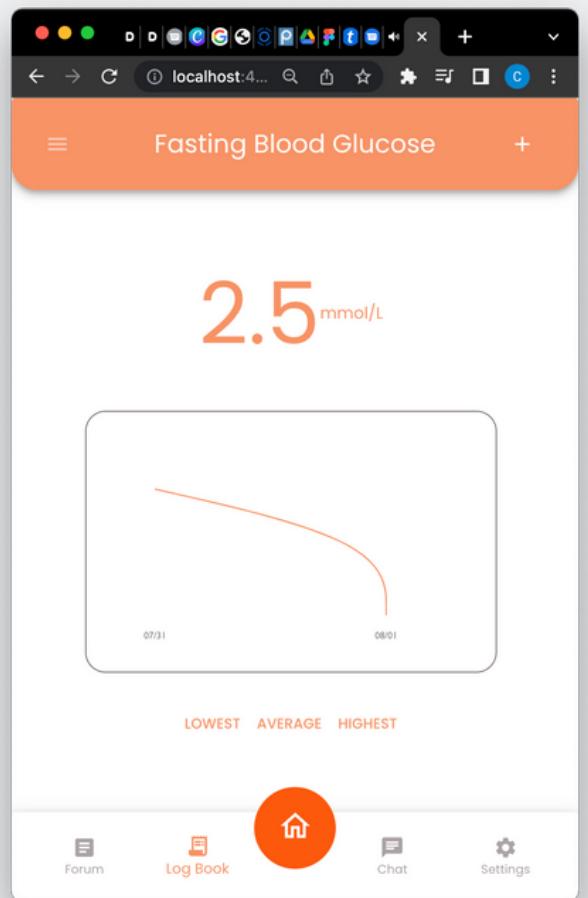
### 3. INTEGRATING COMPONENTS WITH TELESCOPE API INSIDE OF WEBAPP



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## IN APP INTEGRATION

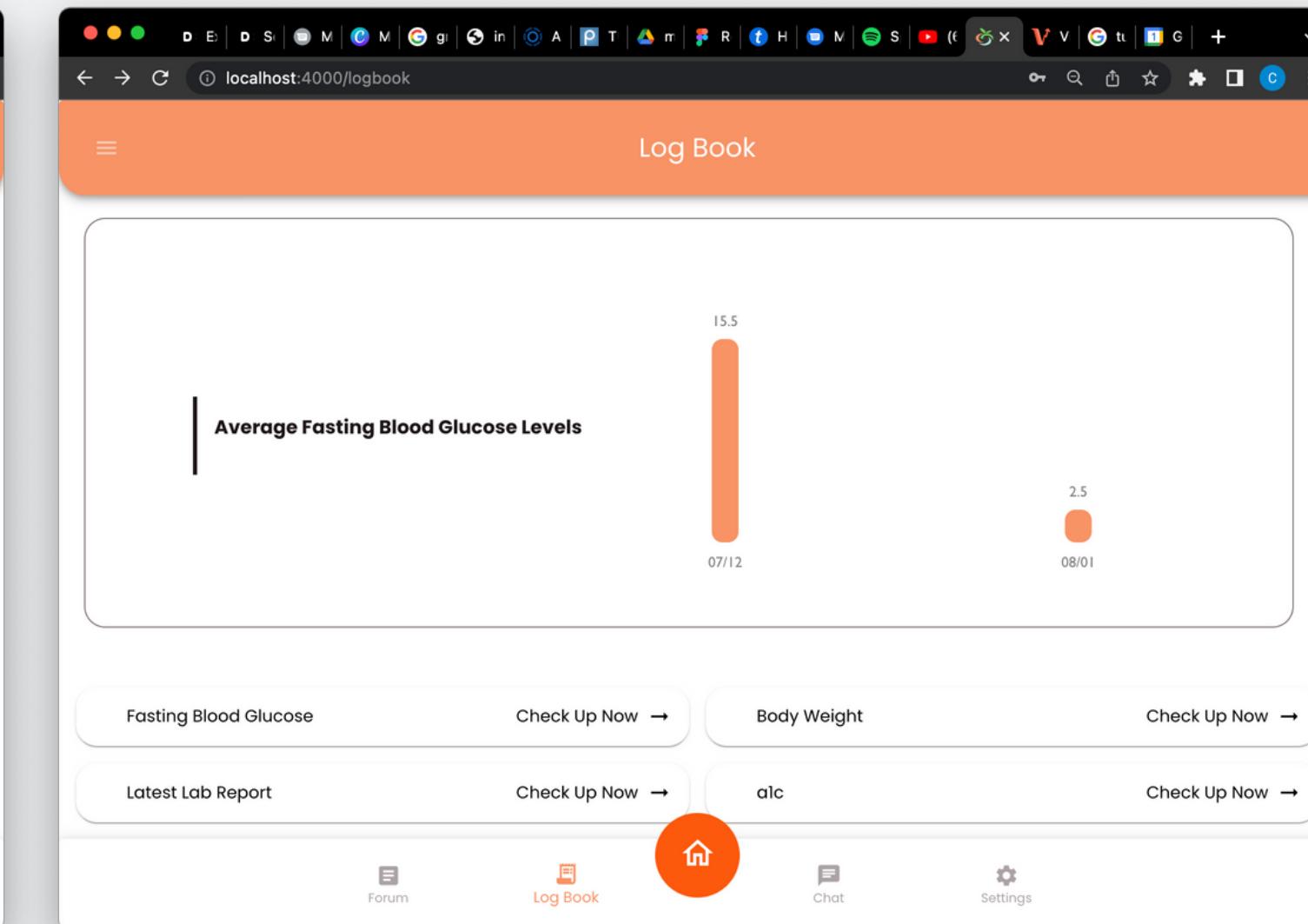
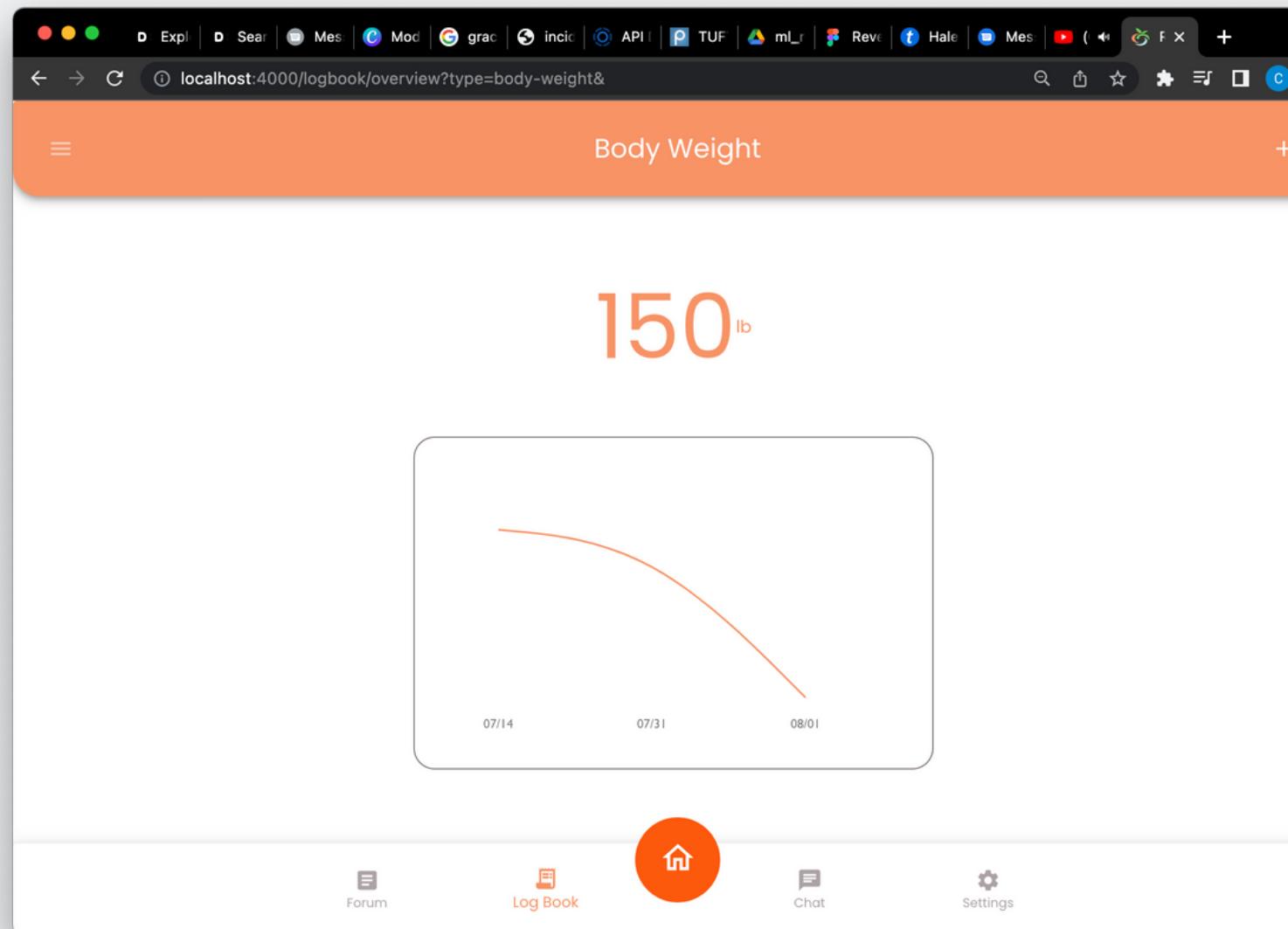
### 3. INTEGRATING COMPONENTS WITH TELLESCOPE API INSIDE OF WEBAPP



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## IN APP INTEGRATION PT

### 3. INTEGRATING COMPONENTS WITH TELLESCOPE API INSIDE OF WEBAPP



## SIDE QUESTS

- Spearheaded the Company's Typescript style guide , under the supervision of Sebastian
- Customized a drag and pull calendar component using the React-big-calendar component library for a new potential Tellescope drag-calendar option



<https://tellescope.notion.site/Style-Guide-95eba7025939499186d0bc843b1688f5>

check it out!

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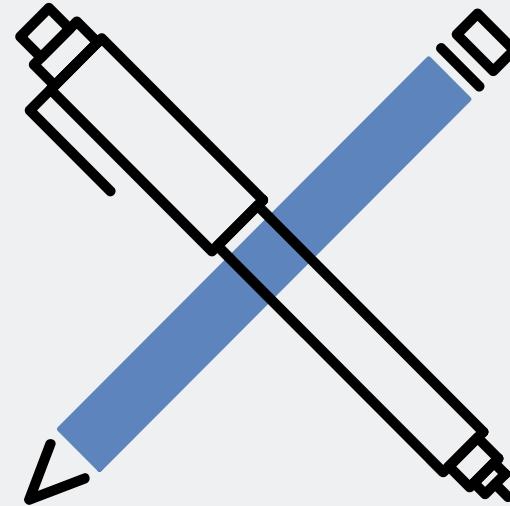
## CHALLENGES

- Navigating to pages functionally, and succinctly
- edgecases surrounding graphing user data when there is not enough
- Unfamiliarity with making calls to the back end to render objects

## SOLUTIONS

- Using existing codebase to model a component that maps to separate pages using a react-hook
- thorough testing in the webapp, use of the .js string library
- Reaching out to Sebass for help with the telescope aa pi, learning how to use the enduser hooks and integrating data fetching into the component call in the webapp

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# Experience Reflection

## technical skills

### Git, and Project Collaboration

Contributed to a typescript development Mono-repository for this web app, on a daily basis

### TypeScript react-doc, and hooks

Through working on this project I have gained almost 250 hours of typescript front-end experience

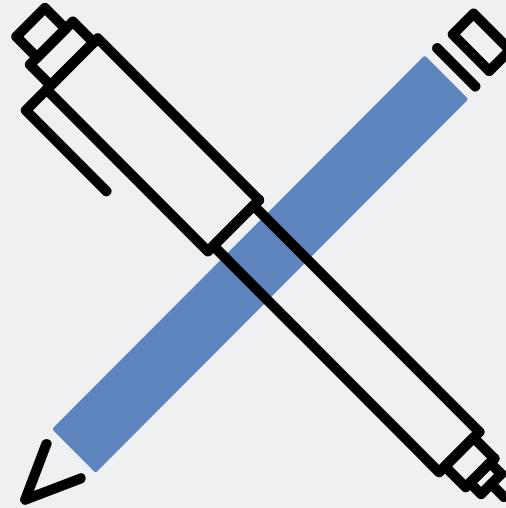
### Functional programming

focused on functional, component based programming for front-end using constants, and static objects

### Storybook component prototyping

Used storybook to create and test components before development

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# Experience Reflection

## Soft skills

### Communication with project manager

Gained experience asking for help, and communicating workload through the duration of this project with my manager

### Communication with Clients

Engaged in email correspondence with clients about webapp features, sat in on meetings to present progress made in the app, and integrated feedback