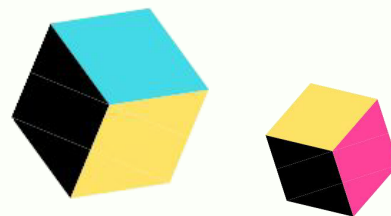


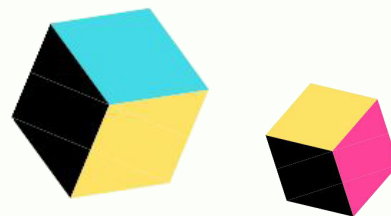
# Workshop Schedule

- 9:00 – 10:00 OMC WebApp Introduction
- 10:00 – 10:30 Frontend Introduction
- 10:30 – 11:00 Break/Free Time
- 11:00 – 11:30 CSS Exercise
- 11:30 – 11:45 Discussion
- 11:45 – 12:45 Frontend Exercises/Testing Session
- 12:45 – 1:00 Concluding Remarks



# Introductions

- Richard Bent – Backend Testing, Backend Developer
- Luisa Cardona – Project Manager, Frontend Designer
- Samantha Perez – Lead Frontend Designer
- Christopher Polynice – Lead Tester, Backend Developer
- Cody Traywick – QA, Lead Backend Developer





# **What is Web Application Development?**

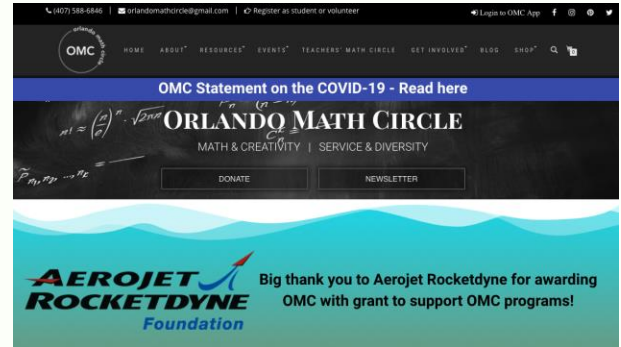
# Web App Development

- Process involved with building a web application
- Focused on interacting with the browser than standard engineering processes
- Built with web technologies (HTML, CSS, JS)
- Stores (Database, Files)
- Manipulates Data (Create, Read, Update, and Delete)



# Web Application VS Website

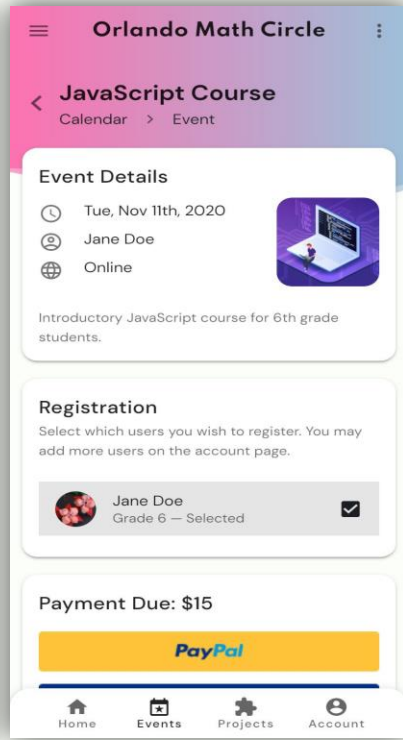
- The key difference is how we interact with each
- Web applications are defined by their **input** - we create, read, update and delete data within a web application.
- Websites are defined by their **output** - we read the news, marketing information, FAQs on websites



# OMC Web App

An event calendar system with an app-like experience on a mobile browser.

- Event management and check-in system
- Volunteer management
- Email notifications for events and newsletters
- Extended usability through admin panel
- Open source, documented, and extensible





# **Project Management**



# Project Management Worksheet

- Complete Pre-Assessment Questions
- Go over material
- Complete Lesson Review

## Lesson: Web Project Management Fundamentals

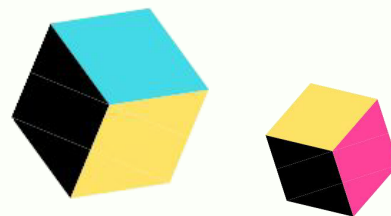
### Objectives

By the end of this lesson, you will be able to:

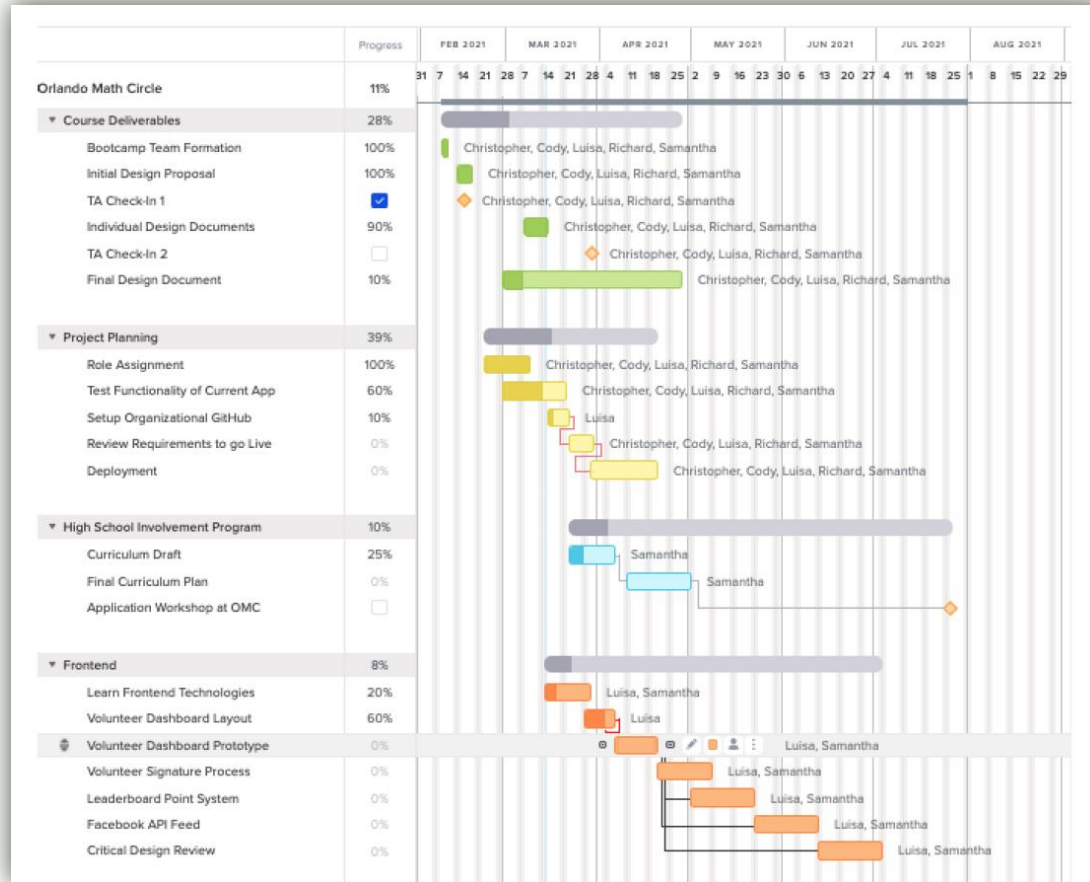
- 1.1.11: Document site project implementation factors (includes stakeholder input, time frame, scope, desired functionality, required technologies).
- 1.1.12: Create a Web project plan, including development timeline, site rollout plan.
- 1.2.2: Document customer expectations and feedback.
- 1.2.3: Communicate plans and progress regularly to ensure that completed project meets stakeholder/customer expectations.
- 1.2.4: Identify and manage changes in project scope (includes scope creep).
- 1.2.5: Document changes in development plan.
- 1.2.6: Create a project tracking report.
- 1.2.7: Conduct a project evaluation, including acceptance documentation, summary of technologies used, project style guidelines.

# Team

- Orlando Math Circle – Client/Sponsor
- Richard Bent – Backend Testing, Backend Developer
- Luisa Cardona – Project Manager, Frontend Designer
- Samantha Perez – Lead Frontend Designer
- Christopher Polynice – Lead Tester, Backend Developer
- Cody Traywick – QA, Lead Backend Developer

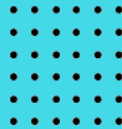


# Gantt Chart



# Milestones

Est. Date	Milestones	Status
2/16	TA Check-In 1	Completed
2/18	Project Requirements / Initial Design Document	Completed
3/1	Setup Application v1 Locally	Completed
3/1	Test Functionality of Current Application	Completed
3/12	Status Presentation	Completed
3/15	Project Status and Documentation Review	Completed
3/23	Review Pending Requirements with Client to go Live	Completed
3/23	Setup Organizational GitHub	Completed
4/2	TA Check-In 2	Completed
4/6	Frontend Mockup with Client	Completed
4/6	Initial Curriculum Plan for High Schoolers	Completed
4/20	Frontend Prototype	Completed
4/20	Push Application v1 Live	Postponed
4/28	Final Design Document	Completed



# Frontend

# Frontend Overview

- Vue.js through the Nuxt.js framework
- Server-Side Rendered (SSR)  
Single-Page Application (SPA)
- Vuetify component library
- Separation of concerns in single-file components
- Assets and design direction by Sheina



```
<template>
  <div>
    <v-toolbar flat color="transparent">
      <v-btn icon to="/">
        <v-icon large>mdi-chevron-left</v-icon>
      </v-btn>
    </v-toolbar>

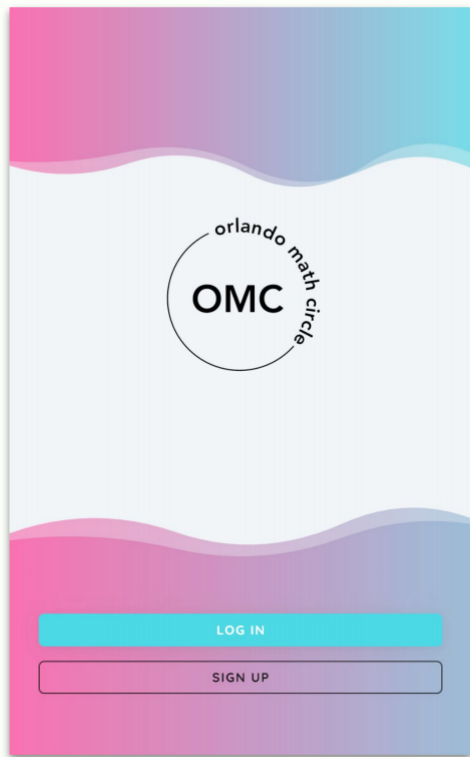
    <v-container>
      ...
    </v-container>
  </div>
</template>

<script>
export default {
  layout: 'landing',
  auth: 'guest',
}
</script>

<style lang="scss" scoped>
.example {
  a {
    text-decoration: none;
  }
}
</style>
```



# Landing Pages



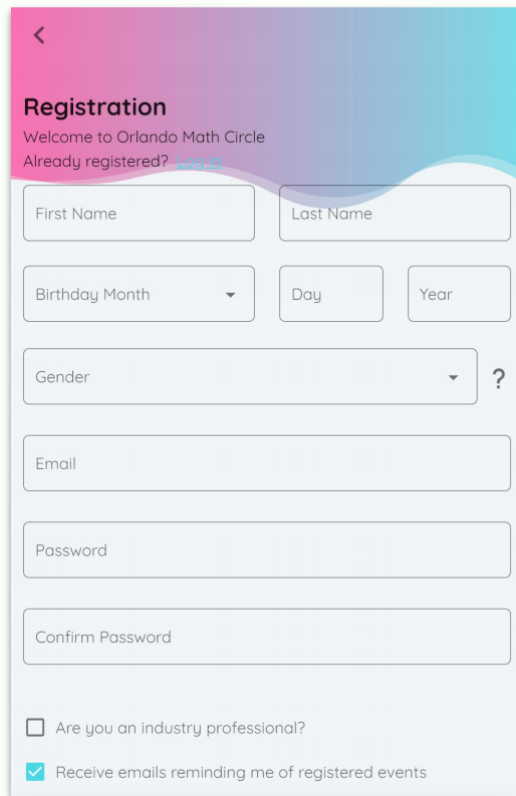
orlando math circle

OMC

LOG IN

SIGN UP

This landing page features a pink and blue gradient header and footer. The central area is white with a circular logo containing the text 'orlando math circle' and 'OMC'. At the bottom, there are two buttons: 'LOG IN' in a blue box and 'SIGN UP' in a pink box.



<

## Registration

Welcome to Orlando Math Circle  
Already registered? [Log in](#)

First Name Last Name

Birthday Month Day Year

Gender ?

Email

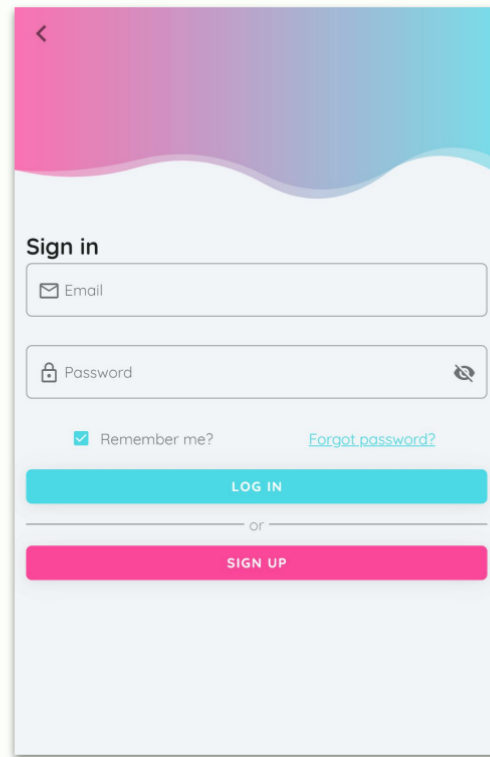
Password

Confirm Password

☐ Are you an industry professional?

☒ Receive emails reminding me of registered events

This registration form has a pink and blue gradient header. It includes a back arrow, a title 'Registration', a welcome message, and a link to 'Log in'. The form fields are: First Name, Last Name, Birthday Month (dropdown), Day, Year, Gender (dropdown with a question mark), Email, Password, and Confirm Password. At the bottom, there are two checkboxes: 'Are you an industry professional?' and 'Receive emails reminding me of registered events' (which is checked).



<

## Sign in

Email

Password

☒ Remember me? [Forgot password?](#)

LOG IN

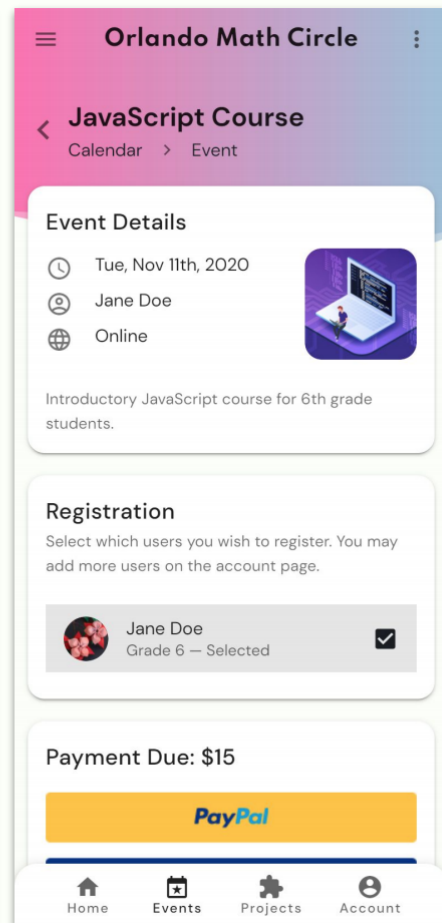
or

SIGN UP

This sign-in form has a pink and blue gradient header. It includes a back arrow, a title 'Sign in', and fields for Email and Password. Below the password field is a 'Remember me?' checkbox (checked) and a 'Forgot password?' link. There are two buttons: 'LOG IN' in a blue box and 'SIGN UP' in a pink box, separated by an 'or'.

# Events Page

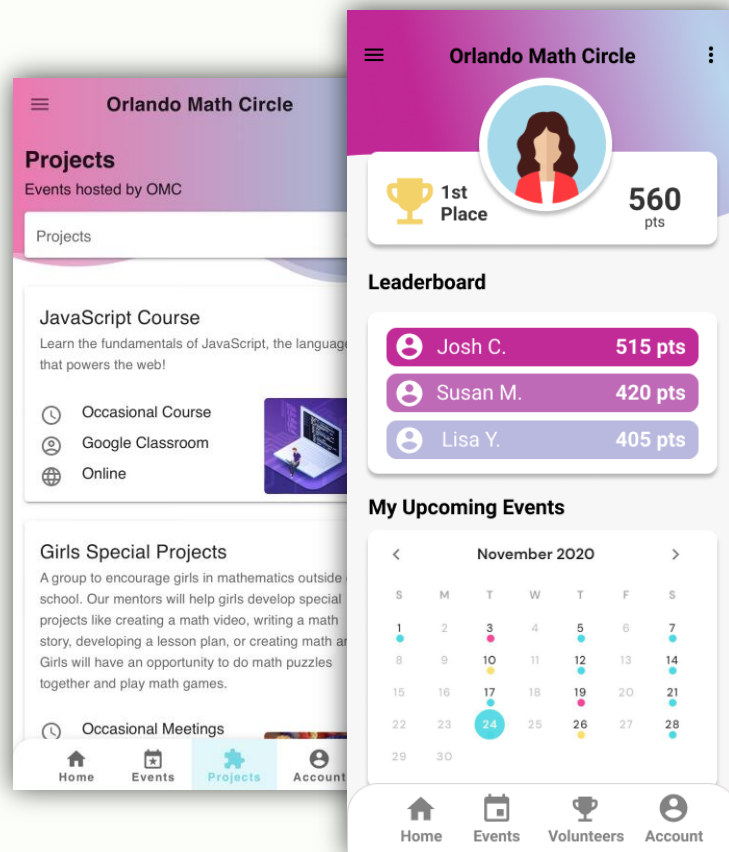
- Configurable calendar of events
- Sub-event page for registering to events
- Adults can register multiple users at once
- Fee payment through PayPal Orders API
- Users can register as volunteers and pick a job





# Volunteer Dashboard

- Reengineered the existing Projects page into a more functional space for OMC
- Proposed by the Senior Design team
- Increase user engagement in the mobile app through friendly competition
- Potential to expand in the future



# Volunteer Dashboard

- Leaderboard standing and accrued points
- View personal upcoming events
- Navigate available projects
- Request to swap a shift if a volunteer can no longer attend an event, subject to admin approval
- Point/Award system discussions in progress with sponsor

**Orlando Math Circle**

**My Upcoming Events**

Calendar for November 2020:

S	M	T	W	T	F	S
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					

**Projects**  
Series of events hosted by OMC.

**JavaScript Course**  
Learn the fundamentals of JavaScript, the language that powers the web!

- Occasional Course
- Google Classroom
- Online

Navigation: Home, Events, Volunteers, Account

**Orlando Math Circle**

**JavaScript Lesson**

Mon, Mar 8, 2021  
12:00 AM - 8:30 PM

Online

Event Fees  
Late Fee - \$5.00 Per Person

Undergraduate  
Boys and Girls

**Swap Shift**

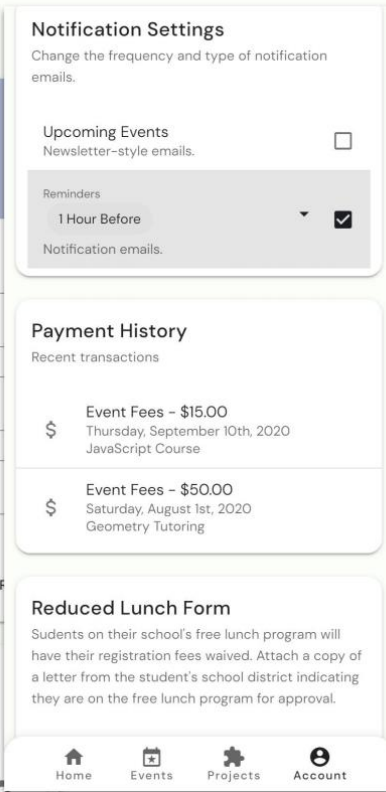
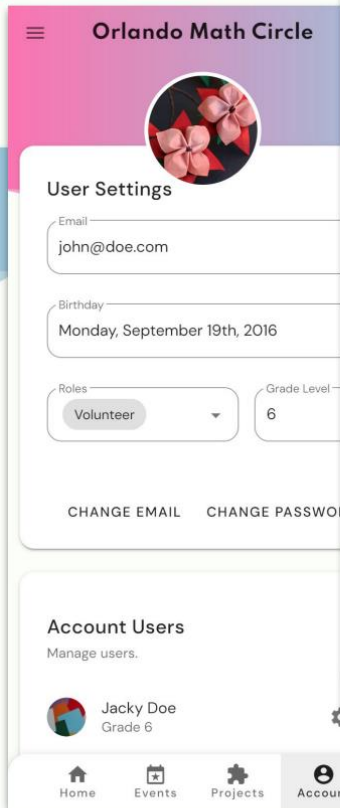
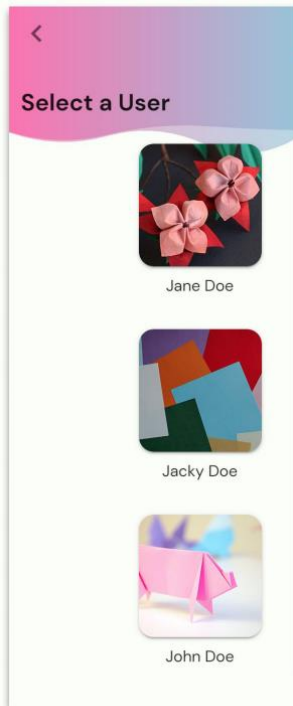
If you can no longer attend this event please make sure to find a replacement below.

select volunteer

Navigation: Home, Events, Volunteers, Account

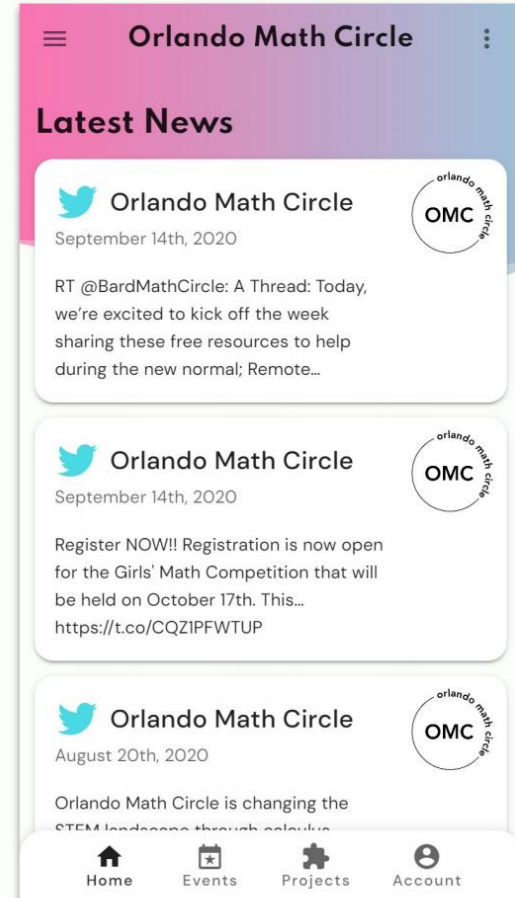
# Account Page & Switcher

- Customizable email notifications
- Volunteer and reduced lunch forms
- Adults can add other users to an account
- Switch easily between any user from the navigation bar
- Transactional user actions
- View payment history



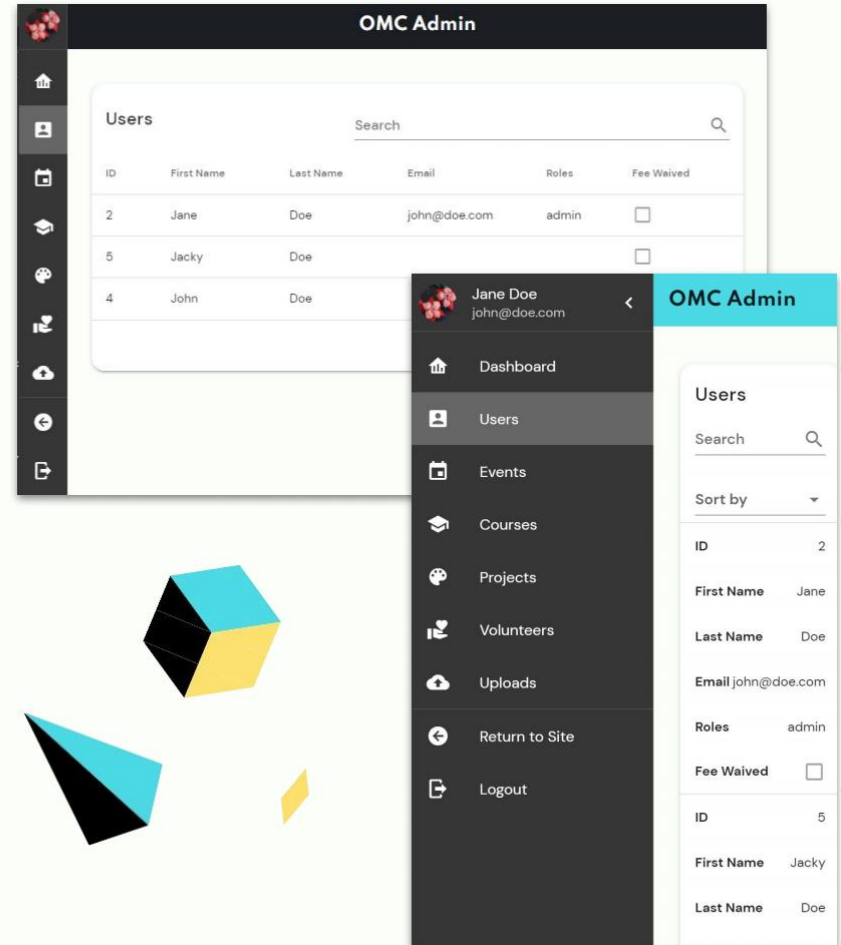
# Home Page

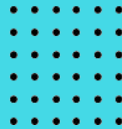
- Landing page for news and upcoming events
- Twitter integrated news feed
- Notification bar for important user information



# Admin Panel

- Available only to users with the administrator role
- Create, update, or destroy any entity
- Search users by grade level, genders, ages, or roles
- Email users en-masse through the panel or by retrieving the emails comma-separated
- Dashboard with basic statistics
- Home of the captive attendance page
- Tabular data best suited for larger devices, but will operate just the same on mobile





# Frontend Basics

# HTML

- HTML is the standard markup language that composes a web page
- Web browsers take HTML elements to render and display text, images, and additional visual and audio content



# CSS

- While HTML is the skeleton for the content displayed on a website, CSS (Cascading Style Sheets) is the style sheet language that allows such content to be more visually appealing





# JavaScript

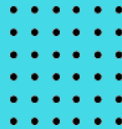
- Transforms static sites to dynamic and interactive ones
- Despite similar names, note that JavaScript and Java are not related
- Students with experience in Java, C, or Python may find JavaScript's syntax more familiar compared to HTML/CSS



# Vue.js

- Vue.js is the frontend JavaScript framework used to build SPAs and UIs
- As Vue uses a HTML-based template syntax and inline CSS to style components, familiarity with HTML, CSS, and JavaScript makes learning Vue much simpler





# Frontend Exercises

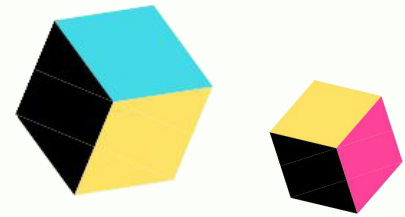
# CSS Practice

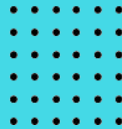
Head to <http://flexboxfroggy.com/> and complete the 24-level interactive game to gain practice with CSS's flexbox layout module.



# Color Guesser Game

- HTML/CSS/JavaScript
- Gain familiarity with RGB color values and JavaScript functionality
- Follow the tutorial provided in the OMC docs to build the color guesser game below





# Testing Session

# Getting Started

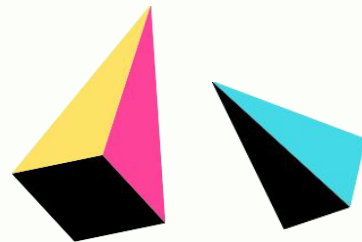
- Head over to **mobile.orandomathcircle.org** on the web or on your phone and use the credentials below to log in:

	Email	Password
1	workshop1@orandomathcircle.org	OMC1_2021!
2	workshop2@orandomathcircle.org	OMC2_2021!
3	workshop3@orandomathcircle.org	OMC3_2021!
4	workshop4@orandomathcircle.org	OMC4_2021!
5	workshop5@orandomathcircle.org	OMC5_2021!

# First Testing Task

Here we will focus on the Log In Page, Home Page, and Account Page:

- ☐ Log in to the app with the provided credentials
- ☐ Select Remember me?
- ☐ Navigate the Home Page and click on some of the provided links
- ☐ Head over to the Account Page and find out what you can do there
- ☐ Sign up for email reminders





# Second Testing Task

Here we will focus on the Events Page and the Volunteer Dashboard:

- ☐ Register for multiple events
- ☐ Try to register as a volunteer
- ☐ Sign up for reminders
- ☐ Navigate the calendar
- ☐ Change the views from the dropdown (Simple, Month, Week, Day, 4-Day)

**Once both tasks have been completed, make sure to fill out the feedback survey!**

THANK YOU!