

The background image shows three young children in a classroom setting, huddled together and focused on a task on a table. They are holding yellow pencils and looking at a piece of paper. The scene is dimly lit, with the primary light source coming from the front, creating a soft glow on their faces and hands. The children are wearing white shirts. The logo is centered over this image, featuring a white circle that partially encloses the text. The text 'orlando math circle' is written in a lowercase, sans-serif font, following the curve of the top half of the circle. In the center of the circle, the letters 'OMC' are written in a large, bold, uppercase, sans-serif font.

orlando math circle

OMC

About Us



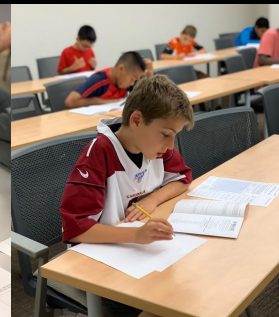
- We are a network of students, educators, & STEM professionals that facilitate engaging math enrichment classes and events to local K-12 students
- We focus on logic activities that promote creative problem solving & critical thinking
 - Towers of Hanoi, infinite series, Wolves & Sheep, etc.
- OMC is the designated test center for major math competitions in Central FL

Check out this video: [Orlando Math Circle](#)

*Weekly community center classes
for elementary schoolers*



*American Math
Competition 8*



*Fractal lesson with Dr. Yana
Mohanty (UCSD)*



Orlando MakerFaire 2019

What We Need

Web app that offers a native app-like experience
entirely through the browser.

Why We Need an App

The old app is closed source, which makes it difficult for OMC high school and college students to adapt the app to OMC's changing needs.

This **new, open source solution** allows for computer science curious OMC students to **apply their problem solving skills** to a real world task.

The app is to be used by parents, students aged 14-18, and adult volunteers to view and register for various events/classes throughout the year. There are generally no more than 30-40 users on the app concurrently and roughly 120 total users. There likely will not be more than 70 concurrent users.

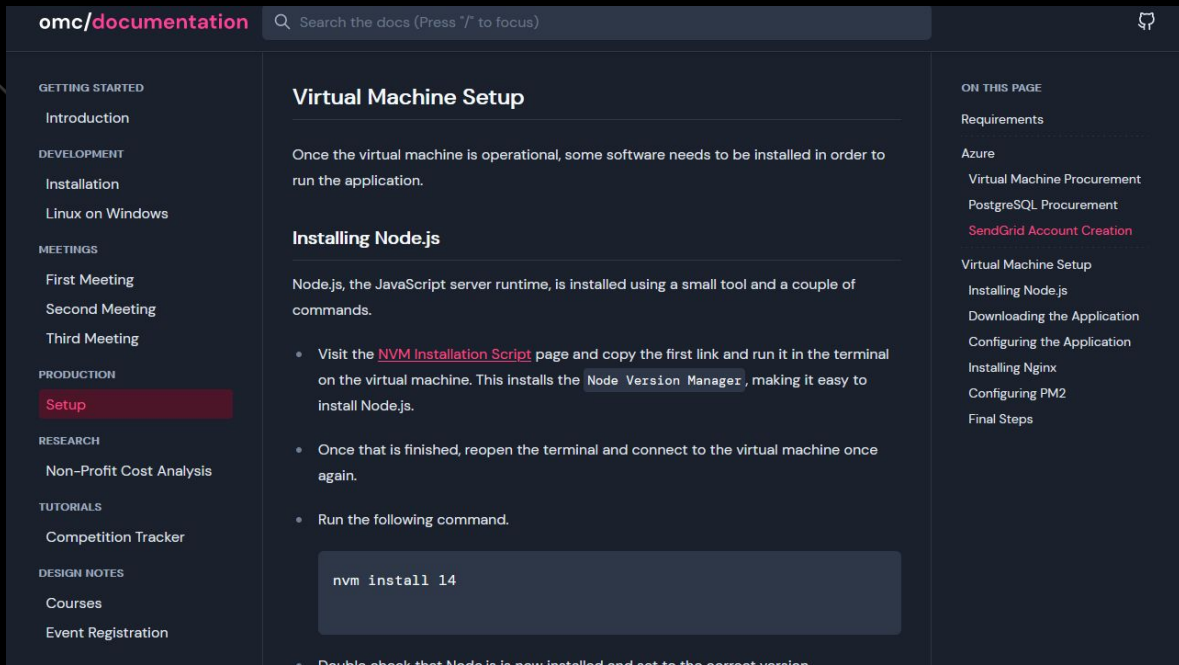
Why Choose Us?

- OMC is a small, local organization that serves and impacts students in Central FL (with a focus on students that are low-income, female etc.). We are a grassroots nonprofit that has already changed lives.
- We have access to board members, parents, and STEM professionals that work in various industries who are willing to help
- You will have easy access to all possible digital media assets

Improving our app will likely lead to higher turnout at our events and will alter the K-12 STEM landscape in Central Florida!! :^)

Why Choose Us?

- Thorough documentation and research from previous team



The screenshot displays the OMC documentation website. The left sidebar contains a navigation menu with categories: GETTING STARTED, DEVELOPMENT, MEETINGS, PRODUCTION, RESEARCH, TUTORIALS, and DESIGN NOTES. The 'Setup' link under PRODUCTION is highlighted. The main content area is titled 'Virtual Machine Setup' and includes an introduction, a list of steps for installing Node.js, and a code block for the command `nvm install 14`. The right sidebar lists 'ON THIS PAGE' with links to Requirements, Azure, Virtual Machine Procurement, PostgreSQL Procurement, SendGrid Account Creation, Virtual Machine Setup, Installing Node.js, Downloading the Application, Configuring the Application, Installing Nginx, Configuring PM2, and Final Steps.

omc/documentation 🔍 Search the docs (Press "/" to focus)

GETTING STARTED

- Introduction

DEVELOPMENT

- Installation
- Linux on Windows

MEETINGS

- First Meeting
- Second Meeting
- Third Meeting

PRODUCTION

- Setup**

RESEARCH

- Non-Profit Cost Analysis

TUTORIALS

- Competition Tracker

DESIGN NOTES

- Courses
- Event Registration

Virtual Machine Setup

Once the virtual machine is operational, some software needs to be installed in order to run the application.

Installing Node.js

Node.js, the JavaScript server runtime, is installed using a small tool and a couple of commands.

- Visit the [NVM Installation Script](#) page and copy the first link and run it in the terminal on the virtual machine. This installs the `Node Version Manager`, making it easy to install Node.js.
- Once that is finished, reopen the terminal and connect to the virtual machine once again.
- Run the following command.

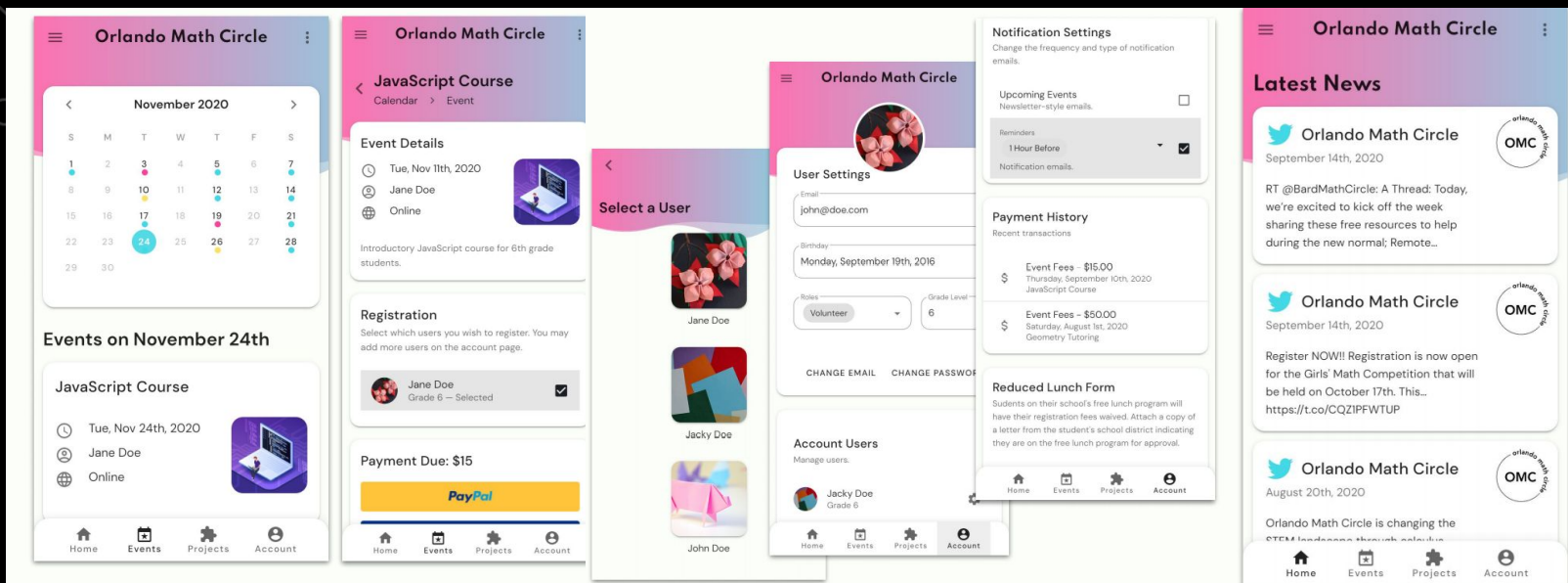
```
nvm install 14
```

• Double check that Node is now installed and set to the correct version.

ON THIS PAGE

- Requirements
- Azure
- Virtual Machine Procurement
- PostgreSQL Procurement
- [SendGrid Account Creation](#)
- Virtual Machine Setup
- Installing Node.js
- Downloading the Application
- Configuring the Application
- Installing Nginx
- Configuring PM2
- Final Steps

Previous SD App Design



Existing Features

- Calendar for users to see upcoming events and classes, and mark themselves as going (we use Google Calendar)
- Allow admin accounts to create and edit events on the calendar, and view who is going for each event
- Ability to create accounts of different types (Admins, parents, etc.)
 - Student profiles must be tied to an existing parent account; parent accounts can be tied to multiple children
 - Student profiles need to be COPPA compliant (a student under 13 must have a parent create their profile for them)
- Register/pay/sign photo release for events (we use PayPal)
- Parents able to upload files for admin verification (.PDF, .jpg, .png, .HEIC)
- Parent accounts able to be flagged by admin as “free/reduced lunch” and bypass registration fees
- Admins able to edit and create accounts

Detailed Requirements

Need Want Stretch



- High schoolers must be included in the process
- Deploy to Azure and link to OMC Non-Profit account
- Framework for extensibility by high school programmers
- Port over existing accounts (there are a little over 100)
- Volunteers must read/virtual sign Volunteer Handbook agreement (.PDF)
- Annual membership (Paypal) (multiple levels) paid starting January 1st for parent account
 - Parents must update account details for each student, each school year
 - Membership students automatically access certain events
 - Non-membership access, notifies admins who can approve case by case
- Ability for Volunteers to swap shifts and events with each other in the app
- Edgecase testing and bug fixing
- Automated email notifications
 - When an event is 2 weeks away/1 day before/1 hour before
- Square support
- Accounts can have a balance or credit towards membership or paying for events
- Events require different amounts of prep time; admins will manually verify/add hours for volunteers
- Support for events with open ended times and configuring extra hours

Detailed Requirements

Need Want Stretch



- Presidential volunteer awards are tied to hours; these change depending on the age of the student
- Prompts for switching account type when a student graduates high school
- Gamification system where students can earn points towards their accounts by volunteering, attending classes and use the points to level up an account
- A framework for Admins to create math challenge questions to be answered by users to gain points
- Donor database to keep track of past donors, especially tied to industry
- Social media feed in the app to view facebook posts
- Discussion board for volunteer communication (with admin approval for posts)
- Student submissions for questions of the week
- Google classroom integration
- Avatar creation instead of static profile pictures (potentially tied to point system)

Our Sponsors & Partners in Education



Natural Math



AoPS

Art of Problem Solving



Daily
Challenge

with Po-Shen Loh



**GLOBAL
MATH
PROJECT**

Uplifting Mathematics for All



Julia Robinson
Mathematics Festival.



TIM McDERMOTT

TUTORING & TEST PREP

DELCARE P.A.

FARIBORZ DELBAKHS, MD

Ardaman
& Associates, Inc.



**McDermott
Will & Emery**



Rosen
Orlando

