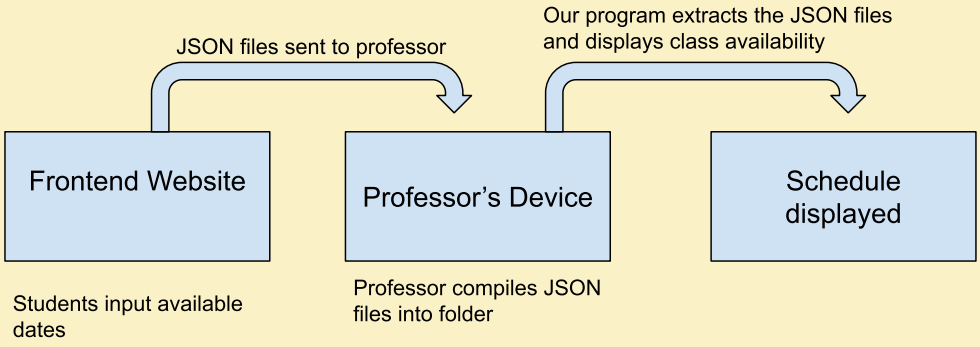
Software Design Project

COMSC 330

Spark Team | February 15, 2026

1. Overview

The goal of our project is to create a scheduling application that will allow teachers and students to decide on a proper time to schedule a class. The flow of our application as it stands is the following:



1.1. Technologies

Our project will use the following technologies:

- React Javascript Framework
- Tailwind CSS (styling)

1.2. JSON Schema

Our goal is to have a working frontend that will allow the students available times to be defined in a JSON file. The schema for that file should follow the following structure:

```
{
  "version": "1.0",
  "eventHash": "abc123xyz",
  "user": {
    "name": "Jane Student",
    "email": "jane@student.edu"
  },
  "availability": [
    {
      "slotId": 1,
      "status": "available"
```

```
    },
    {
      "slotId": 7,
      "status": "available"
    },
    {
      "slotId": 25,
      "status": "preferred"
    }
  ],
  "submittedAt": "2026-02-13T14:30:00Z"
}
```

1.3. Installation

1. Install Node.js

Visit https://nodejs.org/en/download and click the Windows Installer (.msi) button. Accept all the default settings, make sure you click *Automatically Install the necessary tools*. Additional windows may appear, just follow prompts.

2. Install pnpm package manager

Now we need to install our package manager. Open a command prompt as administrator and run the following:

```
node --version
npm --version
```

Both commands should spit back the version you are on. If not repeat the node installation steps. Run the following:

```
corepack enable pnpm
pnpm --version
```

You may be prompted about the download, enter *y*. At this point you are all ready to start work on the application.

2. Running The Application

1. Clone the team repository from GitHub & change into the directory:

```
git clone https://github.com/MatthewKaminskiRWU/Principles-of-Software-
Design---Team-5.git
cd Principles-of-Software-Design--Team-5
cd frontend
```

This is where all of our files will live. In order to get the website running in your local browser:

1. Install dependencies with `pnpm install`
2. Start the webserver with `pnpm dev`
3. Navigate to `http://localhost:5173/` on your browser.

2.1. Resources

There are a lot of new technologies to get familiar with. I would reccomend the following as a good starting point:

- w3schools html basics
- React docs
- Tailwindcss core concepts

3. Git Workflow

It is imperative that we keep our code well documented and organized. We can use Git to keep the repository tidy.

Say you are building the feature to show class timeslots. Your workflow would be as follows:

```
# When you start a coding session first return to the main branch:
git checkout main
# pull the latest changes
git pull origin main
# now make a new branch for whatever feature you are working on
git checkout -b feature/time-slot-grid

# after programming for a bit add your changes
git add .
# and add a descriptive note as to what you worked on
git commit -m "Create TimeSlotGrid component"
# then send the changes to our GitHub repository
git push origin feature/time-slot-grid

# keep coding...
git add .
git commit -m "Add click selection to grid"
git push origin feature/time-slot-grid

# now that you are done for the day - go to GitHub.com
# Click "Pull Requests" → "New Pull Request"
# Select your branch → Create PR
# Ask teammate: "Hey can you review my PR?"
# Teammate approves → Click "Merge"
# Done! Delete the branch on GitHub
```