

tambourinecheesecatrhino (Emma Buller, Tami Takada, Christopher Liu, Owen Yaggy)

SoftDev

P02 -- Design Doc

2022-03-07

Time spent: 60 Minutes

Project Description: *Moran's Maps: An Interactive Map of Stuyvesant*

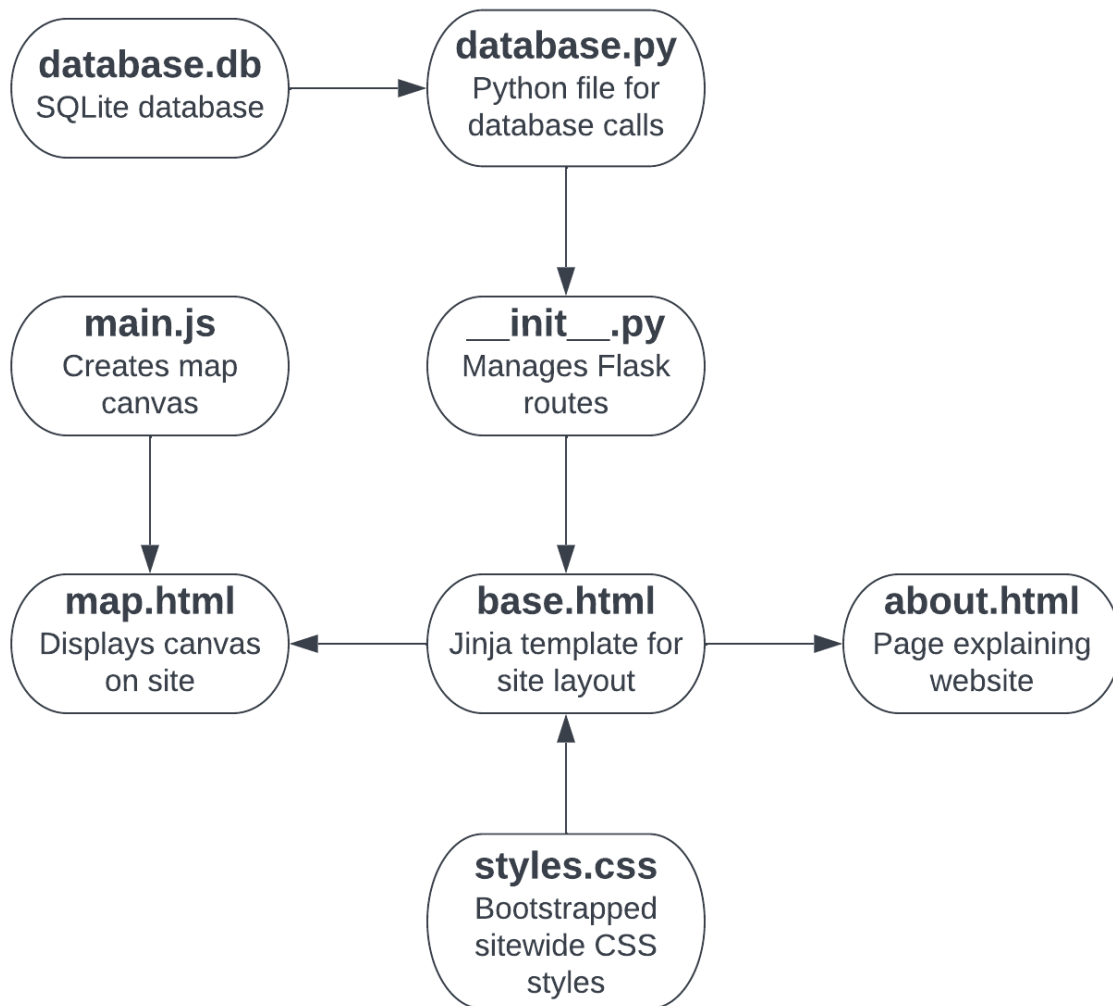
Users will have access to floor plans of the school for all floors, and they can click on various rooms to get information about those rooms. Non-classrooms will be labeled (e.g. college office), and all rooms will have the room number available to view.

Project Components

- Floor plans
 - Currently have floor plans for every floor except for 8 and 10
 - 8 and 10: rough layouts based on other floor plans and data gathering
- Draw polygons around rooms in canvas
 - Store vertex coordinate information in database
 - Use those stored coordinates to draw the rooms in the canvas when you select a floor
- Hover over a polygon: display information of that room
 - Detecting if mouse is in polygon:
<https://medium.com/javascript-fanboi/2021-044-detecting-mouse-hover-over-irregular-shapes-bc9db265ff7d> (A relatively simple algorithm that works by drawing a straight line from a mouse and selects correct room based on the number of times walls from different rooms are crossed)
- Information about classrooms
 - Main rooms (college office, music rooms, etc.)
 - Other information
 - Contact Info (if it's an office)
 - Classroom Information will be initially stored in a Google Spreadsheet
 - Everyone will be able to insert data they have found
 - Spreadsheet will eventually be downloaded as a .csv file and will be fed into a sqlite table
 - Potential list of other information that can be displayed for classrooms (Will be formally decided after we implement basic functionality)
 - Which rooms have computers, smartboards, chalk boards, etc. (Likely)
 - Teachers that teach there (Maybe)
 - Clubs that usually take those rooms (Unlikely)
 - Room Type (English, math, etc.) (Likely)
 - Ways that we could potentially gather information
 - Looking through Talos (Maybe)
 - Surveying classrooms (Likely)
 - Taking pictures (Unlikely)

- Broad information about floors
 - Subject of floor
 - Major rooms (gyms, cafeteria, etc.)

Component Map

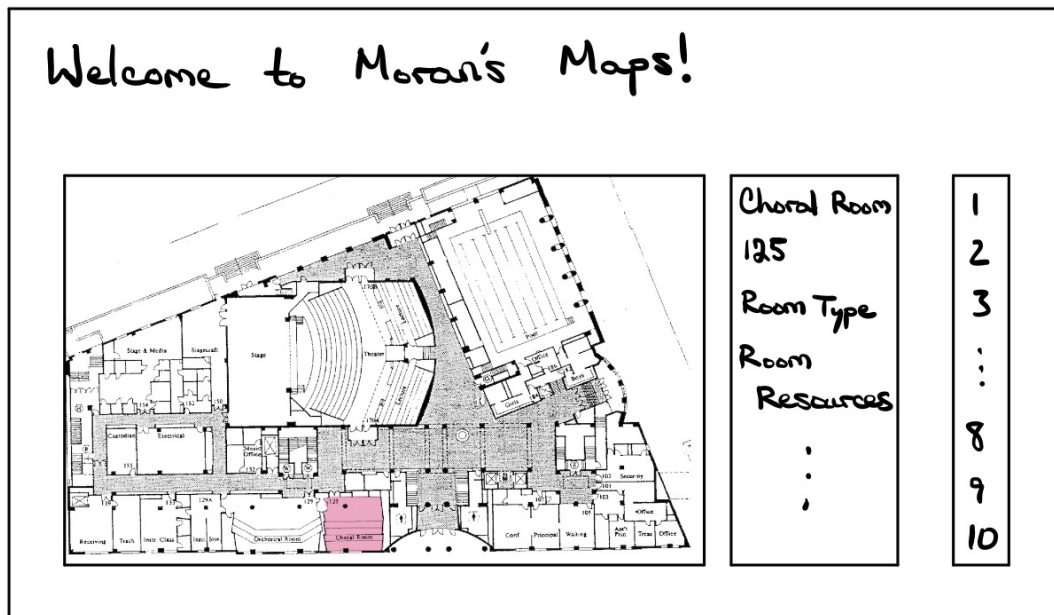
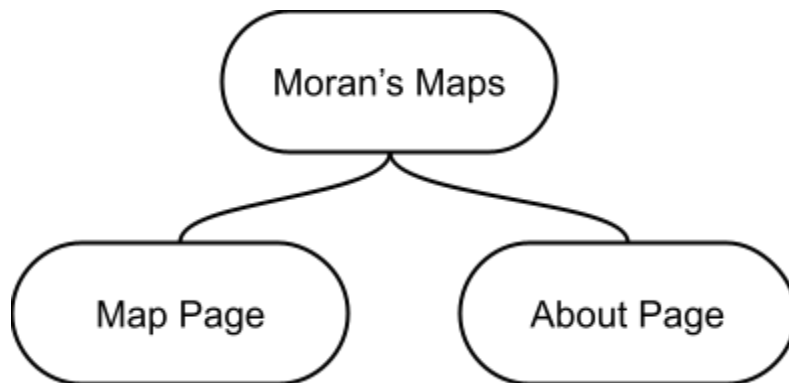


Database Organization

Room table

<i>Columns</i>	Floor	Room number	Room name	Lines (JSON)	Room info (JSON)
<i>Example</i>	1	101	Classroom	{0: '0, 0'}	{'room_type': 'lab'}

Front-end Sitemap



Note: we're generating our own map with canvas elements based on the floor plans we have—the floor plans themselves won't be visible.

Tasks

- Map making
 - Get coordinates for all rooms on all floors
 - Make maps for 8th and 10th floors
 - Get information for each room
 - Prioritize room name (for non-classrooms) and number
 - Make the map look more appealing (If we have time)
- Database
 - Room information database
 - Collecting data for database

- Displaying that Information
- HTML
 - Jinja templates for the pages
 - Needs to contain information to be passed to JavaScript
- CSS
 - Bootstrap formatting
 - Create mobile/small-screen-friendly format
- JS
 - Detect room click → display room info
 - Display different floors based on button click
 - Display the specified floor map
 - Get information from database
- Python/Flask
 - Create routes for different pages
 - Connect database to website

Why Bootstrap

Bootstrap provides comprehensive options for styling with simple classes that all members of our group have experience with.

Roles

Everyone: Information Gathering

Emma: PM, HTML, CSS

Tami: Database

Chris: Javascript

Owen: Python/Flask, Javascript

Ship Date

2022-03-22