

## Coding Conventions

### Mat3D (Matrix Masters)

#### Universal:

- Try to keep all lines within 80 characters. However, if a line's visibility subjectively suffers from this guideline, over 80 characters is allowed.
- Indentation is not optional. Use indentation to ensure flow within your code.
- Variable names should be in camel case. Ex. "Hello There" -> "helloThere".
- Try to keep your code legible. Remove extraneous/old code and abstract portions of your where appropriate.
- Use the K&R bracket style.

#### JavaScript:

- Every file must include a top JSDoc style comment describing the file. This comment should include the tags in this order:
  - @author with author1, author2, ..., authorN
  - @version with the version number

This comment can be replaced by the object constructor comment if the file is ONLY used to specify an object.

- All functions/methods must have JSDoc style comments. These comments should include the tags in this order:
  - @author if the file includes code written by different people on the team (otherwise just include it once at the top comment within the file)
  - @private if the function/method is private
  - @param for each argument provided to a method/function
  - @returns (NOT @return) if the function/method returns something
  - @throws if the function/method throws anything
- Object constructors must have JSDoc style comments. These comments should include the tags in this order:
  - @constructor (Nothing else)
  - @author with author1, author2, ..., authorN
  - @version with the version number
  - @this with {OBJECT TYPE}
- Brackets on single line loops/conditionals are not optional.

#### HTML:

- For files that were created by a team member (or a file that came from somewhere else but was mostly modified), put a block comment at the top of the file containing:
  - <!--
  - Name: (if there are multiple names, add them in one line: author1, author2, ..., authorN)
  - UCSC email: (if there are multiple emails, add them in one line: email1, email2, ..., emailN)

- File name:
- -->
- All HTML element names must be composed of lowercase letter
- All HTML elements must be closed
- All divs must be indented properly and in the order that they were created in
- Try not to have lines run too long (especially for divs or HTML elements that have several attributes). If they do, then follow this format:
  - <opening tag (specify all attributes here)>
  - (tab) (text or other tags go here)
  - </closing tag>
- Use names for classes and ids that make it clear what part of the webpage they are for, as well as for any vue commands.

### CSS:

- For files that were created by a team member (or a file that came from somewhere else but was mostly modified), put a block comment at the top of the file containing:
    - `/**`
    - Name: (if there are multiple names, add them in one line: author1, author2, ..., authorN)
    - UCSC email: (if there are multiple emails, add them in one line: email1, email2, ..., emailN)
    - File name:
    - `*/`
  - All CSS must be placed within mat3d.css. No CSS can be in ANY HTML file unless it can only run when it is together in an HTML file.
  - In a CSS file (such as mat3d.css), separate the CSS by mentioning the files they are used in so it is easier to look at and is more organized.
  - If you copied any CSS from another website, put all the links in a block comment at the top of the CSS file (below the block comment with the name, email etc.).
  - Start each CSS function with a “.” for classes or a “#” for ids.
  - Use one line for each CSS declaration and keep them all in between the curly braces.
- For example:

```
○ .matrices {
    ■ padding: 10px;
    ■ border: black 5px;
    ■ border-style: solid;
○ }
```

### Python:

- For files that were created by a team member (or a file that came from somewhere else but was mostly modified), put a block comment at the top of the file containing:
  - `"""`

- Name: (if there are multiple names, add them in one line: author1, author2, ..., authorN)
- UCSC email: (if there are multiple emails, add them in one line: email1, email2, ..., emailN)
- File name:
- """"
- Follow the JavaScript/Universal guidelines where applicable.
- Use all lowercase letters for method names.
- Put two line breaks between each method.