Quick note to anyone apart from this document's intended audience (my professor) stumbling upon this dumpster fire:

DO NOT use this document as reference for any of your projects or works, I had no idea what I was typing 90% of the time.

Audacity

- Description
  - A popular software for editing and recording audio, it is widely used amongst sound engineers, composers, and scientists alike. Furthermore, it is open-source and cross-platform.
  - https://www.audacityteam.org/

- Architectural Styles
  - Audacity is composed of a relatively small "core" component, along with a wide plethora of libraries and modules; such as wxWidgets for its UI, and PortAudio for audio playback. It also supports plugins and scripting via Nyquist, its dedicated scripting language.
  - https://wiki.audacityteam.org/wiki/ArchitecturalDesign
  - https://github.com/audacity/audacity

- Quality Attributes
  - Modifiability
    - Source: End user
    - Stimulus: Wants to add a new plugin
    - Artifact: Audio effect feature
    - Environment: Runtime
    - Response: Plugin is added successfully
    - Response Measure: Plugin is usable and functional
  - Maintainability
    - Source: Developer
    - Stimulus: Wants to add a new feature
    - Artifact: New code
    - Environment: Development time
    - Response: New feature added successfully
    - Response Measure: Performance of new feature
  - Usability
    - Source: End user
    - Stimulus: Wants to learn how to use the program
    - Artifact: GUI
    - Environment: Runtime
    - Response: Sees all available features in the GUI
    - Response Measure: Amount of features usable without opening the manual

Matplotlib

- Description
  - A comprehensive and easy-to-use Python library for creating publication-quality data visualizations, such as graphs, scatter plots, bar plots, linear regression, and vector fields. It can be used in tandem with popular math libraries for Python such as NumPy.
  - https://matplotlib.org/

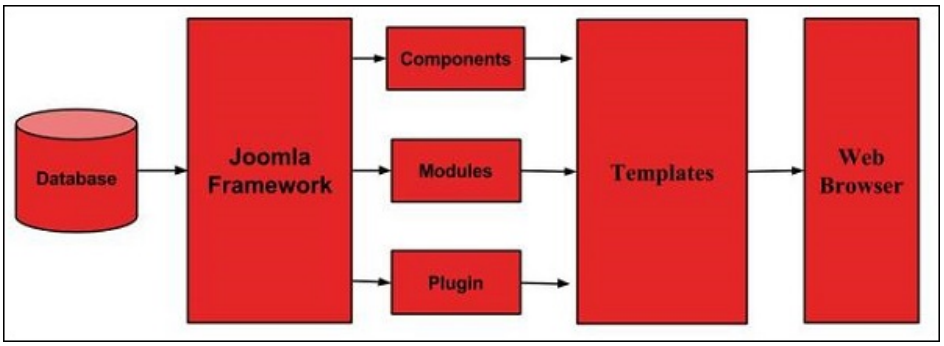
- Architectural Styles
  - Matplotlib uses a layered style consisting of three layers; Backend, Artist, and Scripting.
    - The Backend layer handles interfacing with the renderer, window, and output devices.
    - The Artist layer handles translating script code and data into rendering elements such as lines, points, arcs, and texts to be rendered by the renderer.
    - The Scripting layer (pyplot) provides an intuitive and light interface for scripters to use.
  - https://github.com/matplotlib/matplotlib
  - https://www.aosabook.org/en/matplotlib.html

- Quality Attributes
  - Usability
    - Source: End user
    - Stimulus: Wants to learn how to use the library
    - Artifact: System
    - Environment: Runtime
    - Response: Graph generated
    - Response Measure: Intuitiveness and ease of use
  - Integrability
    - Source: End user
    - Stimulus: Wants to use Matplotlib with other Python libraries
    - Artifact: System
    - Environment: Development time
    - Response: Integration successfulness
    - Response Measure: Number of new bugs
  - Performance
    - Source: End user
    - Stimulus: Scripting commands
    - Artifact: Artist and Backend layers
    - Environment: Runtime
    - Response: Graph generated
    - Response Measure: Time to generate the graph (Latency)

Joomla

- Description
  - Joomla is a free and open-source content management system (CMS) for publishing web content, that provides capabilities for multiple users with different permission levels to manage content, data or information of a website project. Joomla is used all over the world to power millions of websites.
  - https://www.joomla.org/

- Architectural Styles
  - The Joomla framework is written in PHP, and uses the Model-View-Controller architecture. It uses MySQL (MS SQL version 2.5 or above, and PostgreSQL version 3.0 or above) to store data.



  - https://github.com/joomla/joomla-cms
  - https://www.tutorialspoint.com/joomla/joomla_architecture.htm

- Quality Attributes
  - Usability
    - Source: End user
    - Stimulus: Wants to create a website
    - Artifact: Website project
    - Environment: Runtime
    - Response: Website created
    - Response Measure: Ease of use, user satisfaction
  - Integrability
    - Source: End user
    - Stimulus: Wants to use a Joomla extension
    - Artifact: Joomla extension
    - Environment: Development time
    - Response: Extension installed and integrated
    - Response Measure: Number of extensions, amount of bugs
  - Modifiability
    - Source: End user
    - Stimulus: Wants to modify contents
    - Artifact: Modified contents
    - Environment: Build time
    - Response: Contents modified
    - Response Measure: Time taken to recompile and redeploy