Introduction

There is a great need for a quick and flexible understanding of a set of open source projects. With thousands of open source projects, this is key to determining the health and sustainability. That is where Sorting Hat comes into play.

Software Product Overview

Sorting Hat is one of the may metric tools Grimoire Lab has. It is a part of Augur, which is software suite for collecting and measuring structured data about free and open-source software (FOSS) communities. It maintains an SQL database of unique identities of community members across potentially many different sources.

System Use
- Users can do many tasks with the overall goal of creating and managing unique identities and organizations within a specific registry.

System Requirements
- Actor/s: User
- Use case:
    - User logs in to database
    - User adds an identity
    - User affiliates identity
    - User merges identity to unique identity
    - User enrolls identity to organization
    - User logs off
- System functional specification:
    - User can add identities
    - User can affiliate identities
    - User can get and set configuration parameters
    - User can see entries from blacklist
    - User can add entries to blacklist
    - User can delete entries from blacklist
    - User can export identities from the registry
    - User can get configuration parameters
    - User can set configuration parameters

- User can enroll identities into organizations
- User can create an empty registry
- User can remove identities from organizations
- User can edit profile
- User can see information about a unique identity
- User can merge identities
- User can see organizations and domains
- User can add organizations and domains
- User can delete organizations and domains
- User can move an identity into a unique identity
- User can see enrollment information available in the registry
- Non-functional requirements:
  - The database should be able to store a maximum of one million identites
  - Multiple people should be able to access the database at one time
  - Secure login and logout of database should be in place to ensure reliable data security
  - Any command should take no more than a minute to complete

Design Constraints
- Database must be run and stored using MySQL
- Must be able to utilize other Grimoire Lab tools
- Sorting Hat software must be written in all Python
- Only a safe login and logoff method can be used
- Must be compatible with different Operating Systems

Purchased Components
- MySQL database

Interfaces
- Integration of Sorting Hat onto Python scripts is possible using its API, which uses a database object in order to connect