

Requirements for Genealogy App

The genealogy app functions by reading a provided genealogy document, and then creating a family tree based on this data. Once the family tree has been created, it should provide a number of quality of life features to help the user read and navigate the tree, such as the ability to search for members of the tree or add new members.

1. Functional Requirements

- 1.1. Provide a GUI which allows users to interact with the database: Upon running the app, the user is given the options “Search”, “Add Person”, “Edit”, “Add Marriage”, and “Exit”.
- 1.2. Add person objects to the database: The user should be able to add a person to the database and provide information about them that is then entered into the database. They can select the person’s parents from men and women already present in the database.
- 1.3. Create a new partnership: Users should be able to create a marriage between two person objects and set the details of the marriage.
- 1.4. Edit existing person objects: Users should be able to edit and add attributes to existing person objects.
- 1.5. Return search results based on name: If a user searches a family name, given name, or full name contained in the database, the system will find and return a list of IDs that match that name.

- 1.6. Provide information about a searched person: The user can access data about a person who has been searched, such as their children or their birthday. The user can also access information about the person's relatives.
- 1.7. Read in a text file to build the database: The user can read in a text file of current people, their family relationships, and their partnering history.
- 1.8. Save new database to text file: Upon request the user can save any changes made back to a text file. The user will be provided with an example text file to work with, including a default format.
- 1.9. Fill in blanks in the family tree with placeholders: It is likely that some members of the tree will be unknown so there will be placeholders for them ("N/a").
- 1.10. Add children: The user can record a new child(ren) of an existing or new partnership.
- 1.11. Return children from multiple partnerships: It is required to trace all children of each person across all of their partnerships.

2. Nonfunctional Requirements

- 2.1. Generality: A Person added to the database can be added without requiring knowledge of if this person is a parent, married or not, etc.
- 2.2. Usability: Implementing a GUI so that the user does not have to type in the command line, all formatting for input is explicit and clear, and allows for a more aesthetic design in data entry.
- 2.3. Consistency: All people have the same attributes available to be accessed, but unknowns will be kept as "N/a" to prevent any data gaps.

- 2.4. Testability: Test set of data allow for testing, which can be used to look for bugs or other defects
- 2.5. Reusability: The underlying systems behind the genealogy app can be reused for different families, given the correct format is used for the read in file.