Summary of design:

When the user begins the app, GenealogyApp will create three objects: GeneDataBase gdb, OutputFile op, and UserGUI user. GenealogyApp will contain the main to better control interactions between classes. GeneDataBase will read in “FamilyTreeInputTextV2.txt” and generate a HashMap<String, Person> with all people (Person class) made. GeneDataBase will continue processing the file to create relationships for the individuals in the map. After, the user may add people, search the tree, or make changes presented through a number of components in the UserGUI. Once the user has indicated they are finished, an output file of the final HashMap, with user additions/interactions, will be made for the user to save if they would like, and the program will close.

* + 1. GenealogyApp
       1. Main code, contains GeneDataBase, OutputFile, and User objects.
    2. GeneDataBase
       1. Processes file at read in, generates HashMap<String id, Person p> data structure for family tree, creates Person objects with all known data stored, and appends relationships to Person objects.
    3. OutputFile
       1. Copies HashMap that is stored in GeneDataBase and writes all data to a temporary file that the user may save when they are finished using the app.
    4. Person
       1. Contains attributes for all known data about an individual and the relationships the individual shares with other Person objects in the data set. Additionally, calculates the age of a person, deceased or not.
    5. User
       1. User GUI that will allow data entry through: checkboxes, drop down selection bars, click-commands, or keyboard entries.

1. Database
   * 1. The database should differentiate between partnerships and children of said partnership.
     2. The database should find different types of relationships between its entries, i.e. aunts and nieces, grandparents and grandchildren, etc.
     3. The database should allow for “gaps” in information, such as unknown parents. In this case, we should still be able to relate siblings.
     4. The user should be able to add people to the database.
     5. For each person entry in the database, certain attributes are stored if applicable:
        1. ID
        2. Given name
        3. Family name
        4. Date of birth
        5. Date of death
        6. Birthplace
        7. Death Place
        8. Age
        9. Suffix
        10. Labels defining if they are a child of a partnership
        11. For each partnership entry in the database, certain attributes are stored if applicable:
            1. The children of the partnership
            2. Marriage start date
            3. Marriage end date
            4. Marriage location