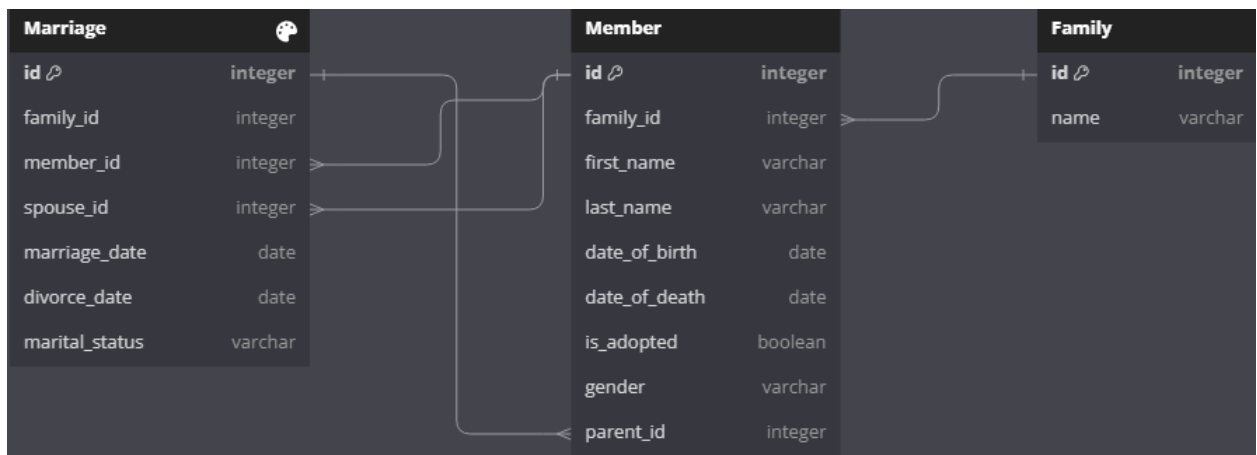


Genealogy Portal

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Entity-relationship Diagram (ERD)



Assumptions

- Parent id can be null (root member).
- Regardless of the sexuality of each person, each marriage is recorded with the ids of the two people involved.
- Family names can be changed, so it is best to record all family members with ids.

- For DOB and DOD, if some people only remember their year or month-year only, their DOB and DOD will be added automatically to be the first day. Example: John remembers his DOB in 1975 -> his DOB will be 1st Jan 1975.
- Since a family tree can be traced back to ancient times, polygamy is allowed.

Problems

- A person can be a member of more than one family:
 - Member of families from both parents: if John is a Shelby's and Esme is from the Lee's, then their children will be a member of both families.
 - Adopted child: if a person is adopted then later discovers his/her family, then that person is a member of both genetic parents and adoptive parents.
- A person can adopt a child without a partner, meaning it is hard to display in the given order.
- Twins, triplets, quadruplets, ... need to be sorted in a logical order (alphabetical).

Cache strategies

1. Cache solutions

- Spring-boot-starter-cache is used to cache in this application.
- Since retrieving family tree and member along with member's family requires heavy workload from the server, it is a good practice to cache the response of these APIs.
- Cache the APIs based on the key family id, so later we can remove cache using this key.

2. Cache evicts policies

- When a new member is added or edited, the cache should be evicted to get new family tree or a member's information.
- When the API to add or edit member is called, remove the cache of the APIs based on the family id key.

Project Instruction

To run the project:

Navigate to the source folder.

1. On Windows

Open command prompt or powershell then run command "bash deploy.sh"

2. On Linux/Mac

Open terminal then run these commands

"chmod +x deploy.sh"

"./deploy"

3. Back-up

In case the above commands did not work, open terminal/command prompt at source folder, run these commands:

"./gradlew clean build"

"docker-compose up -d"