IT Requirements

The following are all things that should be documented and discussed prior to the IT equipment being procured for your prototype. Remember that you are securing IT equipment for a prototype only, but you could / should capture the requirements as best you can from the Admissions client for what will eventually become the final project. This will help ensure your project has a better chance of being selected as it will show forethought and insights for the eventual developers (if that's not you).

1. Private Cloud
    1.1. Physical system requirements
        1.1.1. 75 GB of Storage total for VM Host
        1.1.2. A less than a second response time for webpages
    1.2. Virtual system requirements
        1.2.1. Ubuntu LTS 14.04
        1.2.2. Eight virtual instances are expected for the prototype
            1.2.2.1. Additional instances will be able to be brought up to verify scalability
    1.3. Connectivity
        1.3.1. All external traffic enters through the web server load-balancer server
        1.3.2. All servers will be able to communicate with one another internally as part of the intranet.
        1.3.3. All other access to the servers will have to be done from within specific management networks within the company intranet
2. Reliability
    2.1. Service Level Agreements
        2.1.1. 99.99% uptime reliability
            2.1.1.1. Accounting for updates and equipment failure, uptime will increase as the project scales due to a larger amount of available virtual instances
        2.1.2. A less than a second response time for webpage loading
            2.1.2.1. Database queries should all complete within 3-4 seconds
3. Recoverability
    3.1.1. The application will be backed up every night onto tape
    3.2. Backups will be saved to tape and require physical access to be able to be able to recover the system in the event of disaster recovery
    3.3. Versions of the website that are older than 2 previous versions will not need to be retained in the event of data loss
4. Security and Privacy
    4.1. Database
        4.1.1. Three main roles: SuperUser, Admin, and LifeCoach
            4.1.1.1. SuperUser is the level for the CIO of TrueCourse, and can add Admins (heads of other coaching companies.
            4.1.1.2. Admin is the level for adding and/or editing LifeCoaches. This role goes to other company CIOs.
            4.1.1.3. LifeCoach is the basic level. These accounts can login and access the database, also updating the information on clients.
        4.1.2. Update vs. Access

4.1.2.1. Updating through website is done by LifeCoaches. The LifeCoaches would have access to updating client info and adding life events.

4.1.2.2. Non-website database access would be saved exclusively for DBA's, since they are the people who must go into the database and maintain the information.

4.2. Account information

4.2.1. The user data kept on the database is Username and Password, as well as their Name, Address, and Email.

4.2.2. To register with the system, a newly hired life coach will ask the CIO or DBA of the company to add an account.

4.3. Admin access controls

4.3.1. The CIO of TrueCourse will be able to add and remove other Admins and LifeCoaches from the system

4.3.2. The CIOs of other companies will have authorization to add and remove LifeCoaches.

4.4. Security

4.4.1. The system will meet the standards established by the United States Department of Defense for cloud computing

5. Maintenance

5.1. Planned down time requirements

5.1.1. Database maintenance

5.1.2. Once a quarter during recognized slow periods

5.1.2.1. Primarily at night when demand is at it's lowest

5.1.3. Once a year to practice disaster recovery

6. Server (Linux Environment)

6.1. Ubuntu running on server

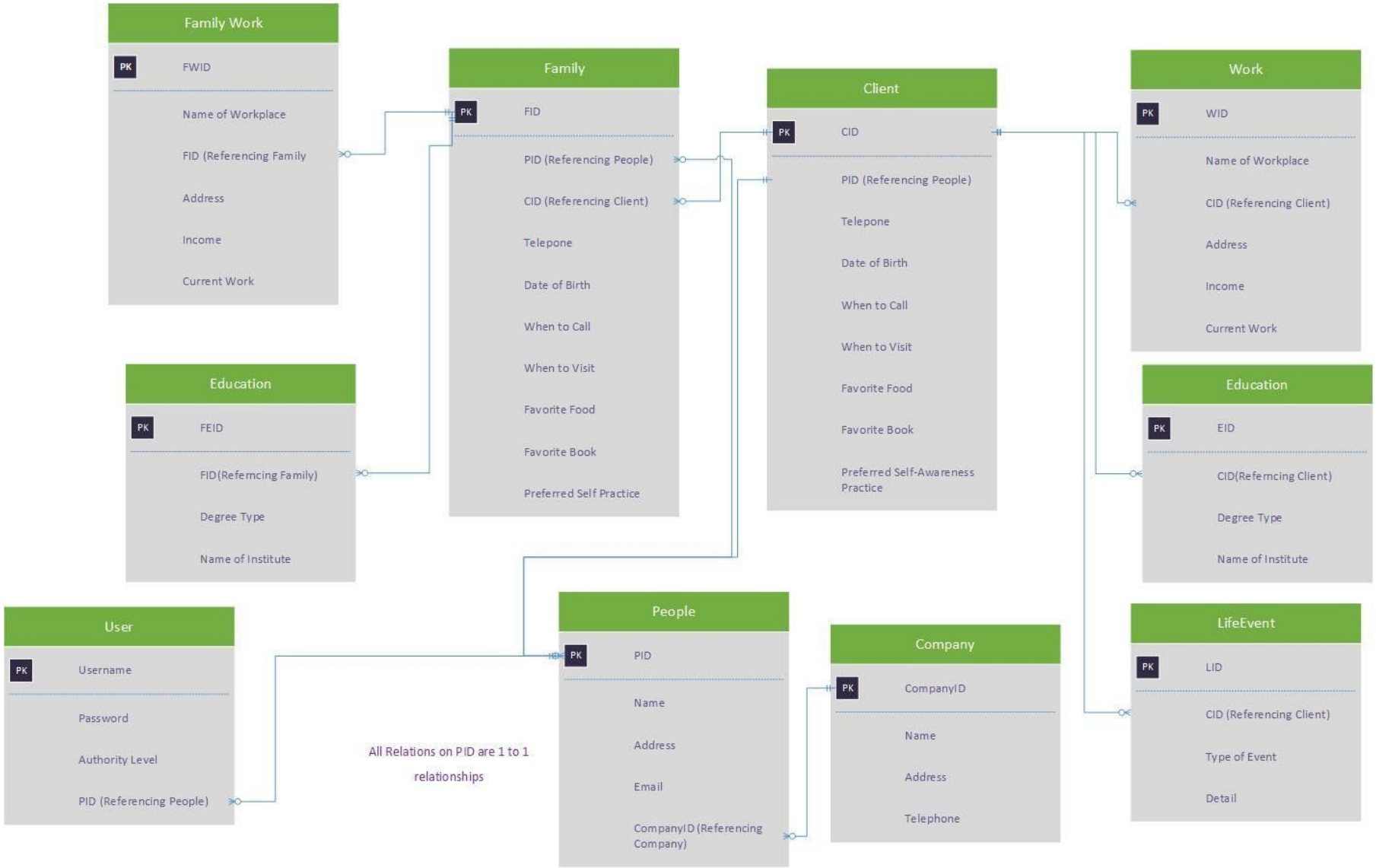
6.1.1. Ubuntu will be running LAMP server(Linux Apache PHP PostgreSQL)

6.1.1.1. The server will also be running Bootstrap which will be used used to make the website responsive

Operating System Minimum Requirements

Minimum	Recommended	Support List
Windows 7	Windows 10	7, 8.1, 10
OSX 10.6	OSX El Capitan	OS X 10.9-10.12
Ubuntu 12.04	Ubuntu 16.05	Ubuntu 12.04-16.04

ER Diagram


Family Work
PK
FWID
Name of Workplace
FID (Referencing Family
Address
Income
Current Work
Family
PK
FID
PID (Referencing People)
CID (Referencing Client)
Telepone
Date of Birth
When to Call
When to Visit
Favorite Food
Favorite Book
Preferred Self Practice
Client
PK
CID
PID (Referencing People)
Telepone
Date of Birth
When to Call
When to Visit
Favorite Food
Favorite Book
Preferred Self-Awareness Practice
Work
PK
WID
Name of Workplace
CID (Referencing Client)
Address
Income
Current Work
Education
PK
FEID
FID(Refernging Family)
Degree Type
Name of Institute
Education
PK
EID
CID(Refernging Client)
Degree Type
Name of Institute
User
PK
Username
Password
Authority Level
PID (Referencing People)
All Relations on PID are 1 to 1 relationships
People
PK
PID
Name
Address
Email
CompanyID (Referencing Company)
Company
PK
CompanyID
Name
Address
Telephone
LifeEvent
PK
LID
CID (Referencing Client)
Type of Event
Detail

The People Table will discern all people within a specific company. Each Company has a Name, Address, CompanyID, and Telephone. This CompanyID relates to People, who each belong to one company. There are three kinds of People: Users, Clients, and FamilyMembers. Users have a username and password in addition to the information from the People table. Clients have a lot of information stored. For each client, the database stores the Telephone, Date of Birth, When to Call, When to Visit, Favorite Food, Favorite Book, and Prefferred Self-Awareness practice of the client, and gives them a CID. Family Members have the same attributes as Clients, except that Family Members have a CID foreign key attached to them and have and FID for a primary key instead of a CID. Work and Education tables have a name and CID on them. Work also has address, income, and if it is the client's current work. Education has the type of degree earned. There are two other tables for FamilyWork and FamilyEducation, the only difference being FID instead of CID. The last table, LifeEvents, records information about what has happened in the life of the Client, with each entry having a LID, a CID to reference the client