**FUNCTIONAL PROJECT SPECIFICATION**

The Functional Requirements for Visual Memory are divided into the following seven functional categories:

1. Visual Memory Application
   1. Upon initialization, the application will require the user to create a username and password and supply an email address.
   2. The application shall require authentication through the activation link sent to the user’s email.
   3. The application shall notify the user of the Visual Memory website and the personal fact sheet.
   4. The home screen of the application will have icons to access the Schedule, Family, Recordings, Provider, Medication, History, and Insurance.
   5. The application shall allow for the user to quickly return to the home page.
   6. The application shall allow for uploading photos from the user’s Android phone or tablet.
2. Schedule
   1. The schedule menu shall be accessible as its own icon from the main menu via a picture icon and text indicating schedule.
   2. The schedule shall allow for synchronization between the schedule app, the medication app, the recordings app, the family app, and the Visual Memory website calendar.
   3. The schedule shall display all of the user’s appointments.
   4. The schedule shall allow the user to select what format to display the appointments.
   5. The schedule shall provide a warning if a scheduling conflict exists.
   6. The schedule shall allow the user to create appointments.
   7. The appointment shall allow the user to specify the subject of the appointment.
   8. The appointment shall allow the user to specify the location of the appointment.
   9. The appointment shall allow the user to specify the start date of the appointment.
   10. The appointment shall allow the user to specify the end date of the appointment.
   11. The appointment shall allow the user to specify the start time of the appointment in hours and minutes (increments of 5) and AM or PM.
   12. The appointment shall allow the user to specify the end time of the appointment in hours and minutes (increments of 5) and AM or PM.
   13. The appointment shall allow the user to place notes in the appointment.
   14. The appointment shall allow the user to set a reminder alarm.
   15. The appointment shall allow the user to select a notification time for the reminder, subject to the following options: At time of event, 5 minutes before, 15 minutes before, 30 minutes before, 1 hour before, 2 hours before, 1 day before, 2 days before.
   16. The appointment shall allow the user to customize the reminder alarm.
   17. The reminder alarm shall allow the user to attach a photo from the family bio storage and retrieval app.
   18. The reminder alarm shall allow the user to attach a recording from the audio capture app.
   19. The reminder alarm shall allow the user to select the display interface for Google Glass: text only, text and audio, text and custom audio, text and photo, text audio and photo, text custom audio and photo.
   20. The appointment shall allow the user to set future reoccurrences.
   21. Future reoccurrences shall provide the following sections: every day, every week, every 2 weeks, every month, or every year.
   22. The user shall be able to select the calendar display for all appointments as a List, Daily, Weekly, or Monthly view.
   23. The schedule shall allow users to interface with it on an Android phone or tablet, or via the Visual Memory website.
   24. The schedule shall allow users to modify or edit the fields of an existing appointment.
   25. The schedule shall allow users to delete appointments.
   26. The software shall be updateable.
   27. The calendar shall allow registration online from nxw111230.wix.com/semgoogleglass
   28. The software shall expose data to standard RESTful API calls.
3. Family(Ben)
   1. The family app shall be accessible from the main menu as its own icon and text indicating family.
   2. The software shall provide the ability for the user to input the following information:

Name of person

Photo of person

Familial relation (or friendship context)

Audio recording of person’s voice

* 1. The software shall expose data to standard RESTful API calls.
  2. The software shall respond to queries based on a person’s name to retrieve selected information.
  3. The software shall allow for retrieval of any part or all of the biographical data
  4. The software shall provide an interface that shall allow the user to browse through the database for purposes of familiarizing the user with the people in the database.

1. Recordings
   1. The recordings menu shall be accessible the main menu as its own icon and text indicating recording.
   2. The software shall provide an interface for the user to record audio input to a maximum length of 10 seconds per recording.
   3. The software shall require an id tag for the person whose audio is recorded for purposes of tracking the recording in the system.
   4. The software shall provide a mechanism to delete or modify existing recordings
   5. The software shall provide a mechanism for retrieval and playback of recordings based on the key of the unique personal id of the person whose voice is recorded.
2. Provider
   1. The provider menu shall be accessible from the main menu via a picture icon and text indicating Provider.
   2. The software shall provide the ability for the user to input the following information:

Provider name

Office address

Office hours

Office phone#

Emergency phone#

Specialty

* 1. The software shall provide the ability for the user to enter appointment dates and times for any provider in the provider list.
  2. All data in the provider software shall be exposed to the calendar software.
  3. All data in the provider software shall be exposed using standard RESTful API calls.

1. Medication
   1. The medication menu shall be accessible from the main menu via a picture icon and text indicating medication.
   2. The interface shall provide the ability for the user to input the following information:

Medication name

Dosage

Frequency taken

Preferred time(s) of day to take

Pill count per prescription

# refills

Prescribing doctor

Cost

* 1. The software shall calculate the number of pills left in the prescription based on the pill count, frequency taken and number of prescriptions left and shall communicate with calendar software to issue an alert to get prescription refilled two weeks prior to the calculated date that prescription would be fully consumed.
  2. The software shall communicate with calendar software to issue reminders to take medication based on the preferred time of day entry for each medication in the database.
  3. All prescription data shall be exposed via standard RESTful API calls.

1. History
   1. The history menu shall be accessible from the main menu via a picture icon and text indicating history.
   2. The interface shall provide the ability for the user to input the following information:

Diagnosed diseases

Recorded surgeries

Medication allergies

Food or other allergies

Immunization records

* 1. All medical history data shall be exposed to standard RESTful API calls.

1. Insurance
   1. The insurance menu shall be accessible from the main menu via a picture icon and text indicating insurance.
   2. The software shall provide the ability for the user to input the following information

Insurance carrier name

Type of insurance (medical/dental/vision etc)

Group #

Member #

Phone # for providers

Phone # for members

Claims processing address

* 1. All insurance carrier data shall be exposed to standard RESTful API calls.

1. Interface Requirements (Glassware to smart phone APP) (Dylan)
   1. Glassware will allow wireless tethering to the user’s Android phone or tablet via WIFI or Blue Tooth 4.0+
   2. Glassware shall utilize the Google Mirror API and appropriate RESTful calls as the access to the Glass operating system.
   3. The calendar Glassware shall display reminder alarms and notifications from the Visual Memory application.
   4. The calendar Glassware shall allow for text reminders/notifications.
   5. The calendar Glassware shall allow for audio reminders/notifications.
   6. The calendar Glassware shall allow for photo reminders/notifications.
   7. The calendar Glassware shall display the subject, time, and location as default for reminders/notifications from the Visual Memory application scheduled appointment.
   8. The calendar Glassware shall display reminder alarms per the user’s interface selection: text only, text and audio, text and custom audio, text and photo, text audio and photo, text custom audio and photo.
2. Website (Dylan)
   1. The website shall allow for synchronization between the Visual Memory application
   2. The website shall allow for inputting calendar appointments, family biographical information, and medical records including provider information, medication, medical history, and insurance information.
   3. The website shall provide links to Alzheimer’s support and information for caregivers.
   4. The website shall provide a personal fact sheet.

**NON FUNCTIONAL PROJECT SPECIFICATION**

The Non Functional Requirements for Visual Memory application are divided into the following categories:

1. Compatibility
   1. The software shall be compatible with the Android version 4.03 and above
   2. The software shall be compatible with the Google MyGlass app.
   3. The web portions of the software shall be compatible with Google Chrome (version 27 or higher), MS Internet Explorer (version 9 or higher), and Firefox (version 22 or higher).
2. Availability
   1. The software shall be available for download from GooglePlay store.
3. Usability
   1. The software shall be easily operated by those with minimal computer skills.
   2. The software functions shall be accessible through both the smart phone app, tablet app, and the web portal.
   3. The GUI application interface shall be easily navigable for inexperienced users.
   4. The GUI application interface shall be configurable with a zoom magnification of not less than 200%.
4. Performance
   1. The software error handling shall notify the user of an error once it is identified.
   2. The software shall have an error rate of less than 5%.
   3. The software shall respond near instantaneous to the user’s inputs.
   4. The software shall respond to 100% of its notifications.
   5. The software shall not drop or miss notifications when battery life is available.
   6. The software shall request ratings from the end user to collect APMs.
5. Integrity

5.1 The master database shall be kept on the website but shall be fully accessible from the smart phone.

* 1. All updates shall be controlled by the website. The smart phone shall request an update but the confirmation and control of updates shall remain with the website.

1. Security
   1. The smart phone software shall not allow any unsolicited update requests.
   2. Access to website will require a unique userid/password combination.
2. Maintainability
   1. The software shall be well documented and follow good design practices to facilitate ease of maintainability.
   2. The software code shall follow standard good programming practices for code comments
   3. The software shall be written in a commonly used programming language that is suitable for the Android platform.