**Project 3 Team 7- GroupMeet- Report with Code Submission**

Our project got off to a very rough start with no one in the group having any idea how the programing languages worked, what to do for the project and how to approach starting. After a great deal of research and testing, our final project has exceeded all of our expectations in many regards.

Initially, python was very difficult to use because we didn’t understand how to compile or the syntax in which to write code. After some practice and a great deal of example reading, we were able to get a strong grasp on the language as a whole, and ended up enjoying the programming process greatly. The language is very flexible and it is much easier to transfer thought process to code due to the simple syntax. We were able to quickly understand how to use different libraries and create our own classes which passed information to each other well.

Our project, GroupMeet, is a meeting organization client which utilizes Google Calendar, Gmail, and Maps. Additionally, the project implements three levels of authentication: two within the client and one within Google services. This authentication provides layers of separation of Google accounts from user accounts and group accounts, allowing users to access groups and modify data with the client and reflect those changes in their Google accounts.

At first we thought that authentication with Google Services would be difficult, but it actually proved very easy and flexible. Designing our own authentication was slightly more troublesome due to the storage of user account information which was done in JSON. Making sure API services were properly authenticated was troublesome, but we were able to figure it out and get the Maps API functioning properly to display locations.

One feature we implemented was email notification through the use of Google SMTP services. This feature is beneficial in keeping users updated on when changes are made to their accounts and group accounts. This was not a feature we were originally planning on implementing, but we thought it would be a good one to add and it was much simpler than adding a public calendar with subscriptions. We did a have issues in working with the calendar API in terms of allowing a calendar to be public, but ultimately provided a better work around.

There were many features that turned out much better than originally anticipated. There were a few tweaks that we would have liked to implement, but the project is functional and performs all of the tasks we originally intended plus more. There were not many major issues, but we would have liked to create a more robust security and authentication service. The one was currently have checks all levels of authentication properly, but does not provide for the most secure method of storing usernames and passwords. Because this was not the project intent, we opted to move on to adding more functionality rather than committing time to refining security details. We would also like to add more graphical interface to the project. Right now it opens multiple windows and handles user input appropriately in all regards, but it would be optimal to incorporate more visuals aspects to better fit today’s visually stimulated society.

Overall, the project went very well and we were able to produces a solid product that we were all proud of.