**Project Description Assignment**

The purpose of this app is to provide a tool to assist students with finding parking on campus more quickly and reliably, so that finding parking isn’t as stressful.

The app will keep track of the available lots on campus and provide information about whether or not the lot is expected to be full, the predicted amount of time it will take to find a spot, and which lots are closest to the user’s destination.

The expected users will be students at UTA. The app will allow each user to provide data via direct user input on lot availability. The app will also obtain passive data from users on the time it takes to park, by utilizing GPS and map functionality.

The user will be able to pull up a map of the campus to view the different parking lots, which will be highlighted based on the current lot status (i.e. Green=Good, Yellow=Busy, Red=Full). The user may also tap on the different lots to obtain more specific information, such as the estimated time to find a spot and the last time a user updated the status of that lot.

The app is not a mobile version of existing functionality; it is intended to provide new functionality to students that is not currently available.

The app will provide the following features:

a. **Real-Time Status:** Provides the current status of each parking lot on campus, denoted by color (Green = Good, Yellow = Busy, Red = Full).

b. **Crowdsourced Data:** Allows users to report parking lot availability to help others get more up-to-date status on each lot.

c. **Estimated Parking Time:** Uses user GPS data and lot status to estimate the time to find a parking spot.

d. **Lot Recommendations:** Suggests lots based on proximity to the user's destination and the status of the lots.

e. **Configurable Settings:** Filters lots based on user settings.

The app will use resources such as the Google Maps API, user GPS data, and a database to store any crowdsourced statistics.

The software development team is comprised of the following members:

**Chiao-Wen Chen (Jenny)** has an Electronics Engineering undergraduate degree. She does not have any experience with Java or Android, but has 3 years of software industry experience with VB.NET windows applications, and 4 years of experience with MVC C# web applications.

**Mansoor Abbas Ali** has a bachelor’s degree in Computer Science and has experience with C++, Python, and basic Java. He does not have any work experience, but has participated in an Android project doing UI development.

**Karthik Somanahalli Muralidhara** has a Bachelor's degree in Information Science and Engineering and has a major project experience in his undergrad on Cloud Computing. To support this , he has 2 years of work experience and has worked with scripting and automation testing using Python, C, and C++ for Agile Quality Assurance system. He is a certified ISTQB QA engineer. He does not have any experience with Android development or coding in Java.

**Subrahmanya Basavapatna Nagaraja Rao** has a Bachelor’s Degree in Computer Science & Engineering (undergraduate) and knows C, C++, Java, HTML, Javascript, Perl, and Python. He does not have any work experience, but has project experience doing authentication using CAPTCHA as graphical passwords for dynamic login. He helped with designing a notified android application (MCE STRADDLER), which is an application for students in Malnad College of Engineering.

**Supreeth Javalli** is a software engineer with a bachelor degree in Computer Science and he has 2 years of work experience on web application development using technologies like JAVA, Spring, HTML, iBATIS, PLSQL, JavaScript, JSF and SOAP using the Rational Application Developer tool. He has basic knowledge of android but doesn’t have any work experience in Android.

**Timothy Szwech** is a senior software engineer with a bachelor degree in Game and Simulation programming and over 6 years of software industry experience. His main experience professionally has been with C++, C, FORTRAN/ADA (to help maintain legacy software), Perl, and Python. He has designed and developed software for multiple projects involving real-time, distributed, and avionics software systems. He has acted in various roles including lead programmer, code review board member, and integration lead. His experience with Android development and Java is limited but he has worked with the Android SDK as a hobbyist.

**Athena Doe** is a senior software engineer with an undergraduate degree in Computer Science. She has over 5 years of software industry experience maintaining and refactoring software for real-time distributed and avionics systems in C, C++, FORTRAN, and ADA, and is currently a code review board member. She also has experience with writing Java applications and scripting using Python, and has basic Android development experience.