Overview
The Project was about increasing the value of the PocketMike by giving it wireless functionality and building an accompanying app to take advantage of the new found wireless capabilities. The biggest challenges we faced was actually figuring out what the app should do. None of us had ever used a thickness gauge and didn’t understand the use case. After we obtained a good idea of the use cases we started developing the app which was also a challenge as none of us had previous mobile development experience.

Objectives
Our objective was to add wireless functionality to the PocketMike and build a supporting app to get the most out of the added wireless features.

Approach
Before we started working we talked with our sponsor GE. This gave us a list of use cases, customer needs, and some brief information what we would be doing in terms of development. We still had to make decisions in terms of what wireless functionality to add, what os to develop for, what IDE should we use for development and what phone should we use as our test machine. We answered these questions as a group by spending a week or so researching and acquiring answers which we then present to our sponsor to make sure our choices were okay with them. We tested our product while developing anytime we added a new feature we would debug it until we fixed any bugs we found and then work on the next new feature until all features we wished to put integrate into the app were integrated. The result of this work was checked by using the actually PocketMike to make sure any communication between the app and the device went through successful. Additionally we used the debugger built into our IDE for more common programming issues.

Outcomes
We finished designing a prototype for the app. The app can do everything we were assigned. It can connect to the PocketMike request certain data from the PocketMike such as the current thickness. It can also take that data and store it on the phone in an internal database. The database can be displayed within the app. The database can also be deleted if the user doesn’t want any of the information. Finally, the database can be exported into a .csv which is compatible with a variety of programs such as excel. All of these accomplishments help the user as they can carry less when they are out in the field additionally it allows them to make less errors as all of the measurements are stored for them.