Software Design

Justification of Choices

From the first, our team decided to adhere to the principles of Object Oriented Programming. Secondly, we wanted to choose a programming language that would have fast execution with plenty of pre-existing resources. C# was ultimately chosen for the aforementioned reasons, along with the fact that both team members had prior experience with the programming language and would thus have more time to focus on the architecture and implementation.

After selecting C# as the programming language of choice, it became necessary to find a suitable library that would enable the software to send and receive SMS messages. Twilio was an obvious choice, as it is widely used and supported, and supports small-scale applications (as in the case of testing the software), yet allows for large-scale applications as well.

After SMS messaging, the next major decision to be made involved how to access the Microsoft Excel file from within the C# program. Fortunately, yet another advantage of the C# programming language is that it was also designed by Microsoft and it consequently has an abundance of resources that integrate quite nicely with Microsoft Excel files. Similar to the selection of Twilio, EPPlus was chosen as the main library with which to interact with the Excel files.