

#### Project 1 Statistics -

- Lines of Code: 1343 (discluding documentation)
- Total Person Hours: 88
- 3 code files
- 15.26 lines of code committed per hour on average

#### Project 2 Statistics -

- Lines of Code: 1802 (discluding documentation)
- Total Person Hours: 49
- 8 code files
- 36.78 lines of code committed per hour on average

Between our project one and project two there is a large discrepancy in lines of code committed per hour on average, there is a few reasons for this. First, we adopted another groups project and as a result reformatted a large amount of their code, which was interpreted by GitHub as new lines of code. Going through our GitHub history, it becomes clear that around two hundred lines of code are a result of this, reformatting and not the addition of new lines. Additionally, our project two used C++ instead of HTML and Javascript. This can vary the lines of code for many reasons, but one obvious one is the addition of header files, which accounted for roughly fifty new lines of code. Accounting for these additional lines of code for project two, our new adjusted lines of code committed per hour on average becomes 31.67. This is more reasonable, but still a large difference from project one. The final reason for this is that for project two we used C++, which has a much more simple user interface, only user a text terminal. As well, C++ is a language our entire group is familiar with, since it is what we were taught in Programming I and II.

To determine our total hours for project three, we will estimate the number of lines of code we will need to write and multiply it by our project one lines of code per hour average, since we are using the same languages for both projects, as well as constructing it from scratch.

Our project one took 1343 lines of code to make. However, it had a large Javascript file because of the battleship game. Our project three is a website, that does not have a comparable logic component to project one. Since our Javascript file in project one was 860 lines we will assume that our project three will have roughly 500 lines of code. 500 lines of code at 15.26 lines of code per hour puts us at roughly 33 hours of coding. However, due to our experience with HTML and Javascript from project one we can expect to spend less time learning. If each person spent 1.5 hour learning for project one with 5 people, we can expect to take 7.5 hours less for project three. This puts our final estimate for project three at **25.5 hours**.