**Postmortem Document**

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**1. Postmortem Results**

**1.1 Things That Went Well**

One of the things that went the best was the fact that our group was able to meet on a weekly basis consistently. Another thing that went well for our project was that could have a meeting with mentors almost every week, even though we couldn’t meet face to face. Another tool we used that made our project a success was the charts package which we used to show our data.

**1.2 Things That Did Not Go Well**

One of our biggest difficulties was that Iperf3 was written in C, but Android was written in Java, the NDK should run C code on Android. Additionally, we spent a lot of time familiarizing ourselves with Android Studio, but the Android Native Development Tools did not contain debugs tools so we had to do the debugging in a different IDE which increased the development time. To prevent future problems, we decided to use Eclipse instead of Android Studio.

**1.3 Lessons Learned While Doing The Project**

The most important lesson we learned while doing this project is to develop a long-term plan. We would be too focused on specific requirements and sometimes lose focus of the larger picture. Along with that we learned the importance of determining or estimating how long certain tasks will take. It can be hard deciding on this sometimes, but it’s important to at least try and set an estimate for how long each task will take. Another important lesson we learned was how to prepare for the presentation. It was a really helpful lesson and is also useful for other classes and professional presentations in our future.

**1.4 What We Would Have Done Differently**

The main thing we would have done differently is showing the result by different charts, customer have widely choices. Meanwhile, Iperf3 is completely a new release, and was written from scratch.

**1.5 Recommendations for Future Projects**

The biggest recommendation we would give is to meet often with your group so you all know what’s going on and you hopefully get more done. Similarly, meet with your mentor(s) every week and sometimes twice a week if you need to. Just try not to put off or cancel meetings with mentors or group members as often as possible. Also try not to leave a lot of work in the last few weeks.

**2. Project Size and Effort Estimates**

**2.1 Size Estimate**

|  |  |  |
| --- | --- | --- |
| **Metric** | **Estimate** | **Actual Size** |
| SLOC | 2000 lines | 3015 lines |
| Classes | 10 classes | 17 classes |
| Modules | 1 modules | 4 modules |
| Help Document | 20 pages | 20 pages |
| User Story Points | 120 points | 140 points |

Most of the estimates were close to the actual. The estimates may be slightly off, because we had to use source from iPerf3 git directory and there was a lot of C code from there. We were able to trim much of it and use what we needed, but we also had to create our own java code for the app.

**2.2 Effort Estimates**

|  |  |  |
| --- | --- | --- |
| **Task** | **Estimate** | **Actual Size** |
| Coding | 60 Hours | 73 Hours |
| Testing | 10 Hours | 20 Hours |
| Documentation | 20 Hours | 36 Hours |
| Total | 90 Hours | 129 Hours |

The actual size for each were larger than the estimates. This might be partly due to us being optimistic, but another issue we ran into was getting debugging working with the NDK, which took longer than we thought to fix.

**2.3 Project Effort Breakdown**

|  |  |
| --- | --- |
| **Project Area** | **% Effort** |
| Training | 5% |
| Requirements | 15% |
| Design | 15% |
| Coding | 30% |
| Testing | 25% |
| Mid-term and Final Reports | 10% |