**Self Quality Assessment Programming 2**

**Group: 07**

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| We are proud of… | Our Assignments |
| We have done better in …. | Our Assignments |
| Implementation challenge 1 | Was fairly straightforward. Used *valgrind* to detect if we were correctly freeing the memory we were allocating from heap. Took a couple tries to ensure that we got all the memory blocks. |
| Implementation challenge 2 | No real challenge here. Just implemented functionality as requested in the problem. Modifying the base TextMessage class in v1 to a message super class called Message. |
| Implementation challenge 3 | Had trouble understanding the problem and what to hand off to what threads. Settled on one thread handled nodes, and one thread handling the bus, while the main thread waits for user input to quit. |
| Implementation challenge 4 | Could not accomplish |
| Optional implementation challenge 5.x | NA |
| Comments in code | We believe the code to be well commented and variable and functions having been given descriptive names. |
| Memory management/leaks | Used the *delete* keyword wherever necessary to free memory allocated using the *new* keyword. Discovered and used tool *valgrind* to check for memory leaks in the program. Also learnt that it has issues running in the Windows Subsytem for Linux (where it would indicate spurious memory leaks that were non-existent) |
| Object orientation/polymorphism | Inheritance used throughout the project. Learnt a lesson in why trying to access a parent classes private members is a silly idea. It’s private! That slip up caused some headaches. |
| Threading | Is a headache and a half trying to manage states across multiple threads, which are mostly mitigated using mutexs. Also learnt that mutexs needed to have a high enough scope so that it persists through various threads instead of being destroyed and recreated in every new thread. |
| Opening and closing resources when using SQLite | Unaccomplished |
| Other comments | None |
| Overall conclusion | Was a pretty great project to test all the concepts learnt throughout the module. |