Describe how your team integrated code from the team members. Which Integration Strategy do you think your team used? Explain why. (250-350 words – 5%)

For our final project we have decided to lean towards a Top Down integration strategy. Top-down integration is an integration testing technique used in order to simulate the behavior of the lower-level modules that are not yet integrated. We started integrating all our code starting with the main program then working our way down the hierarchy. We used this strategy as we think it offers many advantages like easier fault localization, possibility to obtain an early prototype used for our project 3, critical modules are tested on priority; major design flaws could be found and fixed first. The replacement for the 'called' modules is known as 'Stubs' and were also used when the software needs to interact with an external system. Top Down integration also included some shortcoming that we had to deal with including requiring a lot of stubs and mock objects, and low-level utilities that are important are also not tested as well.

Our main module was our test driver, representing the main control module also known as a high-level module and stubs are used for all low-level modules that directly subordinate (present or rank below another) to high-level modules. Then low-level modules or subordinated modules or stubs replace high-level module one by one at a time. The process is repeated until each module is integrated and tested. Another stub replaces present real or control module after completion of each set of tests. These stubs act as temporary replacement for a called module (stubs) and give same result or output as actual product gives. To check if there is any defect or any error occurred or present, regression testing is done and it’s important to reduce any side effect that might be caused due to errors occurred.