This is the part one of integrated Group Project Report #3. It worth 50 points out of total 100 points of Report #3. Please refer to Dr. Ivan Marsic's [Software Engineering Project Report](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report3.html) to finish this assignment. The project group needs to turn in sections 1 – 7, 9, 10, 13, 14 from the list below (The list is adopted directly from Dr. Ivan Marsic's website)

* 1. Design Patterns  
     As for *Interaction Diagrams* indicate and discuss the use of *design patterns* to improve your design.
  2. [Object Constraint Language (OCL)](http://www.omg.org/spec/OCL/2.0/) Contracts   
     List important contracts (invariants, preconditions, postconditions) for classes and their operations (See *Bruegge & Dutoit*, Chapter 9; and *Miles & Hamilton*, Appendix A)

1. System Architecture and System Design (as in [Report #2](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report2.html), revised as needed)
2. Algorithms and Data Structures (as in [Report #2](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report2.html), revised as needed)
3. User Interface Design and Implementation (as in [Report #1](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report1.html) **and** [Report #2](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report2.html), revised to incorporate the use cases that will be completed for the final demo)
4. Design of Tests (as in [Report #2](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report2.html), revised as needed)
5. History of Work, Current Status, and Future Work   
   Instead of the section *Plan of Work* have the section *History of Work* which documents how the actual milestones and deadlines evolved. Compare these against the milestones as planned in Reports #1 and #2.  
   Also summarize (as a bulleted list) your key accomplishments in this project.  
   Discuss the possible directions for future work on this project.
6. References (books, papers, URL's of the sources of information and tools used in the project)

Also a minimum one page must be e-mailed by each student separately to instructor for Reflective Essays.

The detailed instruction please see the link [Software Engineering Project Report](http://www.ece.rutgers.edu/~marsic/Teaching/SE/report3.html). Please ignore the due date in it. Please do NOT simply combine the old work together. This integrated work shall **show the revise if it is needed**. After finish, please please only submit one copy of proposal. This part is due by 11:59 p.m. 11/13/2017.