Guidelines to be followed during the implementation of the project

1. Properly identify the system requirements and incorporate those requirements in the design
2. Design a high level and low-level architecture of the solution by identifying the major components of the project and the communication between them
3. All projects need to be modularized based on the functionality and each modules should span across multiple files
4. Use multi-threaded concept wherever applicable
5. Implement proper locking mechanisms wherever necessary
6. Usage of static and dynamic libraries in the code based on the necessity
7. Follow best coding practices during implementation
    a. Follow proper naming conventions
    b. Input validations need to be performed
    c. Proper exception handling should be done
    d. Make sure all dynamic memory allocations are freed gracefully
    e. Code optimizations and proper reuse of code to avoid code duplications
    f. Declarations and Definitions to be made separately
8. All major process events have to be logged into the windows logging mechanism
9. Document all test cases and misuse cases properly
10. Perform unit testing as well as integration testing of the developed solution
11. Follow Secure coding practices
12. Follow SOLID and GRASP practices