

## Assignment 2

1. **Task:** The software requirement specification document for the tender for the development of “Pest-lab,” a software system for managing a laboratory for pesticides production at one chemical factory, consists of chapter headings that are in accordance with the required quality factors. In the following table, you will find sections from the mentioned requirements document.

*For each section, fill in the name of the McCall’s factor that best fits the requirement (choose only one factor per requirements section).*

Section taken from the software requirement document	McCall’s software quality factor
The “Pest-lab” software system will enable the direct transfer of specific laboratory results to those files of approved pesticides managed by the “Pesticides inventory” software package.	<b>Interoperability</b> <i>(Ensures compatibility and data exchange between different systems)</i>
The probability that the “Pest-lab” software system will be found in a state of failure during peak hours (9 am to 4 pm) is required to be below 0.6%.	<b>Reliability</b> <i>(Defines failure rate and system downtime limits)</i>
The “Pest-lab” software system will include a module that prepares a detailed report of the pesticide’s laboratory test results during the current research. The time required to obtain this printed report will be less than 50 seconds.	<b>Performance</b> <i>(Defines system response time and processing speed)</i>
The “Pest-lab” software to be developed for factory laboratory use may be adapted later for private laboratory use.	<b>Flexibility</b> <i>(Defines adaptability to different environments and user needs)</i>
The training of a laboratory technician, requiring no more than 4 days, will enable the technician to reach level C of “Pest-lab” operator. This means that the trainee will be able to manage the submission of 8 test results per hour.	<b>Usability</b> <i>(Relates to ease of learning and user productivity)</i>
The “Pest-lab” software system will record details of employees logging in. In addition, the system will report attempts by unauthorized persons to obtain information about testing new pesticides from the laboratory test results database. Reports will include detailed information about unauthorized attempts to access the database of “Pest-lab”.	<b>Integrity</b> <i>(Ensures security and access control)</i>
The “Pest-lab” subsystem that deals with testing pesticides may eventually be used as a subsystem in the “Home Department” software package.	<b>Reusability</b> <i>(Allows software components to be used in other projects)</i>
The “Pest-lab” software system will process the monthly reports of the factory management, and the lab management.	<b>Correctness</b> <i>(Ensures accurate and complete processing of information)</i>
The software system should be able to serve 5 workstations and 5 automatic testing machines with a single model AS20 server; and a CS25 communication server that will be able to serve 10	<b>Efficiency</b> <i>(Optimises resource usage, processing, and communication)</i>

communication lines. The hardware system should conform to all availability requirements as listed in Appendix C.	
The “Pest-lab” software package should run a set of standard test data every morning before actual work begins, to verify that the computerized units respond properly.	<b>Testability</b> <i>(Ensures system verification through automated testing)</i>
The “Pest-lab” software package developed for the Linux operating system should be compatible with applications in the Windows 11 environment.	<b>Portability</b> <i>(Defines ease of transferring software between different platforms)</i>