

Assignment 3 Rubric

Assessment: Total 100 marks

- Use cases and design documentation (40 marks),
- Implementation (30 marks), and
- Testing (30 marks)

(5 marks) Use cases (A1 use cases and fixing them based on Assignment 1 grading feedback)

(35 marks) Design documentation and traceability matrix

UML Class diagram, sequence diagram, traceability matrix and code inspection are rubric-based grading

- (15 marks) UML Class diagram (structure):
 - complete relative to the requirements and use case model
 - Are all elements from the requirements covered?
 - Elevators, floors, sensors, buttons ...
 - Well formed:
 - Is UML syntax followed?
 - Consistent with the implementation at the class, relationship and interface level
 - Are all the classes from the implementation shown?
 - Are all their public interfaces shown?
 - Use of the Qt framework elements such as QObject, QMainWindow, QTimer, and QPushButton buttons.
- (15 marks) Sequence diagrams for these scenarios (behavior):
 - (10 marks) 2 Basic use case scenarios (5 marks each)
 - (5 marks) 5 safety feature use cases (1 mark each)
 - State and Activity diagrams (+5 marks to max of 35 for documentation).
- (15 marks) Traceability matrix
 - Requirements to use cases
 - Use cases and/or requirements to design elements. Note that some requirements, for example N floors/M elevators, are satisfied in the design so there may not be a mapping to a use case.
 - Design elements to implementation
 - Requirements and use cases to tests

(30 marks) Implementation

- Code inspection
 - complete implementation: all elements present
 - well commented and understandable code
 - functions achieve a single purpose, i.e. there are no huge functions with multiple purposes
- Builds in Qt without errors

(30 marks) Testing

- (10 marks) main use case scenario 1
- (10 marks) main use case scenario 2
- (2 marks) Help scenario
- (2 marks) Door obstacle scenario
- (2 marks) Fire scenario
- (2 marks) Overload scenario
- (2 marks) Power out scenario