4-5 Assume the FieldOfficer can invoke a Help feature when filling an EmergencyReport. The HelpReportEmergency feature provides a detailed description for each field and specifies which fields are required. Modify the ReportEmergency use case (described in Figure 4-10) to include this help functionality. Which relationship should you use to relate the ReportEmergency and HelpReportEmergency?

A screenshot of a report

Description automatically generated with low confidence

In this case I would build off of the listed step 2 to include text stating more info is needed on a field which would flow into a new event 3 that displays a page or pop-up window describing what to add into that particular field.

To relate the two features I would say HelpReportEmergency extends ReportEmergency because it HRE a functionality of RE.

4-6 Below are examples of nonfunctional requirements. Specify which of these requirements are verifiable and which are not:

* “The system must be usable.”
  + Not Verifiable
* “The system must provide visual feedback to the user within one second of issuing a command.”
  + Verifiable
* “The availability of the system must be above 95 percent.”
  + Verifiable
* “The user interface of the new system should be similar enough to the old system that users familiar with the old system can be easily trained to use the new system.”
  + Not verifiable

5-1 Consider a file system with a graphical user interface, such as Macintosh’s Finder, Microsoft’s Windows Explorer, or Linux’s KDE. The following objects were identified from a use case describing how to copy a file from a floppy disk to a hard disk: File, Icon, TrashCan, Folder, Disk, Pointer. Specify which are entity objects, which are boundary objects, and which are control objects.

* Entity
  + File
  + Folder
  + Disk
* Boundary
  + Icon
  + TrashCan
  + Pointer
* None are control objects

5-8 Consider a traffic light system at a four-way crossroads (two roads intersecting at right angles). Assume the simplest algorithm for cycling through the lights (e.g., all traffic on one road is allowed to go through the crossroad, while the other traffic is stopped). Identify the states of this system and draw a state machine describing them. Remember that each individual traffic light has three states (green, yellow, and red).

The intersection described allows the vehicles 2 states, moving or not moving. Assuming standard traffic lights that are working we would have 3 states for the lights; the mentioned red, yellow, and green to indicate which state the cars are in.

A picture containing screenshot, circle, diagram, font

Description automatically generated