**Software Engineering COMP433**

**Tutorial -1- Good attributes of Software**

**Q#1)** Which of the following systems, you would accept? Justify your Answer.

1. A Medical system in the ICU section in hospital that has a failure rate of 2% in a year.

:?

1. A bank security system that has a 95% reliability.

:?

1. A university registration system that requires 1 day of student training before students are able to use it.

:?

1. A Palestinian banking system that serves a national bank and allows1000 concurrent users to access the system

:?

e) A train station control system that needs **15** days of user training before administrators can use it ?

f) A national pull system (انتخابات) that a reliability of 96%?

g) The failure frequency of a heart-monitoring unit that will operate in a hospital’s intensive care ward is required to be less than one in 20 years. Its heart attack detection function is required to have a failure rate of less than one per million cases.

h) One requirement of the new software system to be installed in a supermarket will not fail, on average, more than 10 minutes per month during the supermarket’s working hours. In addition, the probability that the off-time (the time needed for repair and recovery of all the supermarket services) be more than 30 minutes is required to be less than 0.5%.

i) An HR (Human Resources Management) system that will be used by HR managers to manage employee information, hiring, on boarding, vacation management, reporting etc, that requires new users to be trained in 4 hours.

**Q#2)** If you were a consultant responsible of buying a system for your university to manage university student registration, and were offered the choice of two systems:

A) The first system, is only $100k to buy but requires $1k for an annual system support cost. It requires 5 days training and comes with a new version every year.

B) The second system is only $40k to buy, but requires $3k in annual system support cost. It requires 3 days user training and is updated with a new version every 2 year.

In your opinion, which of the two systems has:

* higher maintainability
* higher dependability
* higher usability