SE 433/333 Software Testing & Quality Assurance

Assignment 2: Software Qualities

Due date: January 17, 2018, 5:45pm (in-class and on-line students)

1. You manage an online service that sells downloadable video recordings of classic movies. A typical download takes one hour, and an interrupted download must be restarted from the beginning. The number of customers engaged in a download at any given time ranges from about 10 to about 150 during peak hours. On average, your system goes down (dropping all connections) about two times per week, for an average of three minutes each time. You have the following options to improve the quality of service of your system
   a. improving the availability by reducing the unavailable time (down time) per week by half, while the mean time to failures remains the same, or
   b. doubling the mean time to failures (MTTF), while the availability remains the same.

   If you only have the resource to do one of the above improvements, *not both*, which option will you choose? Why?

   Hint: You should quantitatively estimate the current availability and MTTF of the system and the impact of each option on your users.