

Homework 1, ECE 590; Due date: 1/16/24 by 11.59 pm  
90 pts in total

1. Read the paper: “Basic concepts and taxonomy of dependable and secure computing,” Avizienis, Laprie, Randell, Landwehr, IEEE TDSC, 2004. Answer the following questions:
  - a. List all the attributes of software dependability and explain their meanings. (15 points)
  - b. Which do you think is the best means to achieve software dependability in the above paper and why? (15 points)
  - c. Use your own words to describe the different definitions of **fault**, **error** and **failure**. (15 points)
2. Take any program that you have written and identify at least one fault (bug), the errors it will cause, the inputs that will trigger the fault and failure that results. How can you avoid them next time? (15 pts)
3. Find a well-publicized incident, read about it and determine, the fault(s), errors and failure of this accident. And find out how the engineers react after the incident happens? (15 pts)
4. Develop and describe a classification of errors. (15 pts)