Concept Question 1-1: What is the difference between a continuous-time signal and a discrete-time signal? Between a discrete-time signal and a digital signal?

A continuous-time signal $x(t)$ is a function of continuous time t, where t is a real number which usually represents time, but may represent space. A discrete-time signal $x[n]$ is a function of discrete time n, where n is an integer, which is an index that represents discrete time. The values of both $x(t)$ and $x[n]$ are continuous, i.e., they are real or complex and may assume any value. A digital signal may be defined in either discrete time or continuous time, but its values are discrete, i.e., they are integers or integer multiples of some real number.