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In this talk, we show the stability and logarithmic decay of the solutions to fractional differential equations (FDEs), where the fractional derivative is in the sense of Hadamard or Caputo-Hadamard with order lying in $(0, 1)$. Both linear and nonlinear cases are included. The solutions can be expressed by Mittag-Leffler functions through applying the modified Laplace transform. In view of the asymptotic expansions of Mittag-Leffler function, we discuss the stability and logarithmic decay of the solution to FDEs in great detail. **Keywords** Hadamard derivative, Caputo-Hadamard derivative, Mittag-Leffler function, stability, decay. (Received January 20, 2021)