C++ for Mathematical Finance (MF703, Fall 2015)

Project #3

Black Scholes Option Pricing

1) Write C++ code to compute the price of a call and put option with the Black Scholes formula.
2) Write C++ code to compute the call and put option Greeks (delta, gamma, theta, vega, and rho).
3) Write C++ code to check for put-call parity.
4) Finally, write a Monte-Carlo pricing engine to price a plain-vanilla call and put option using realizations based on geometric Brownian motion.