Ma323-LAB 08

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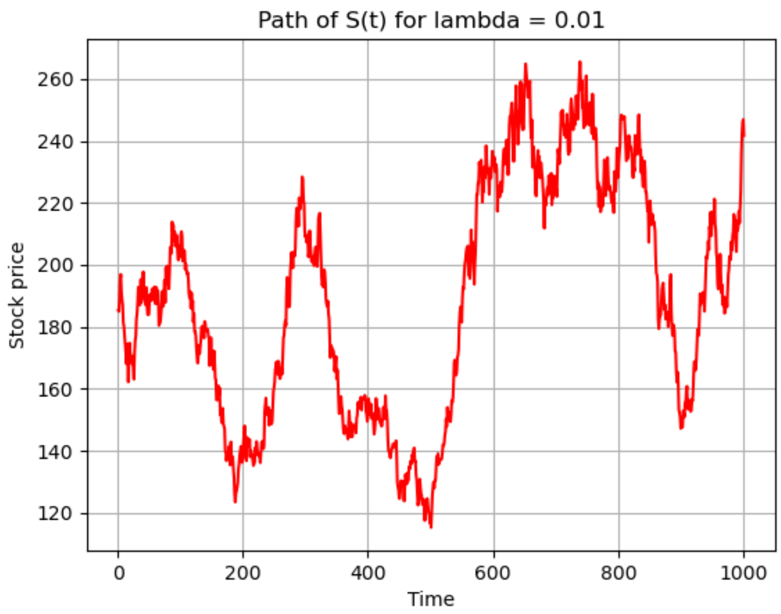
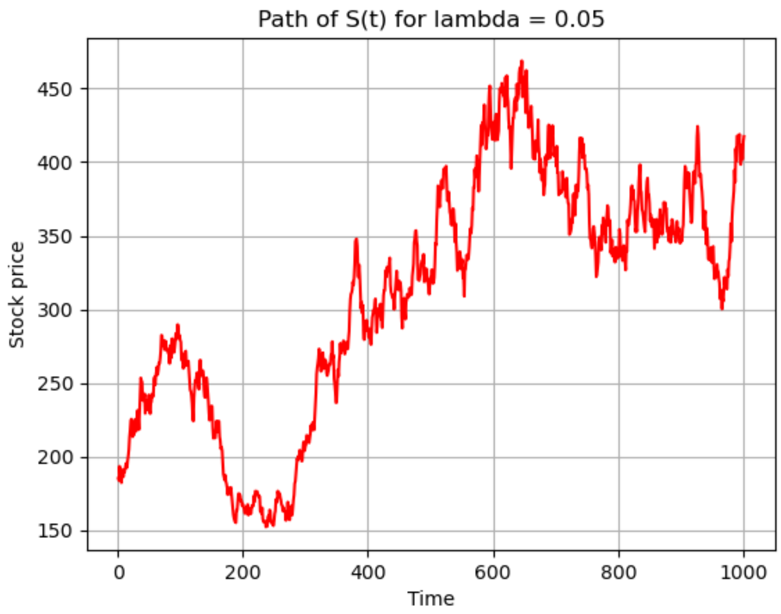
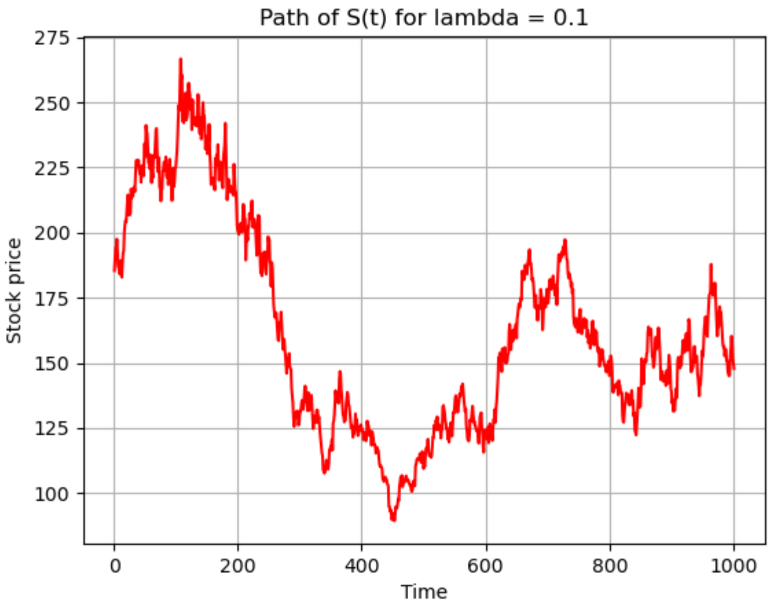
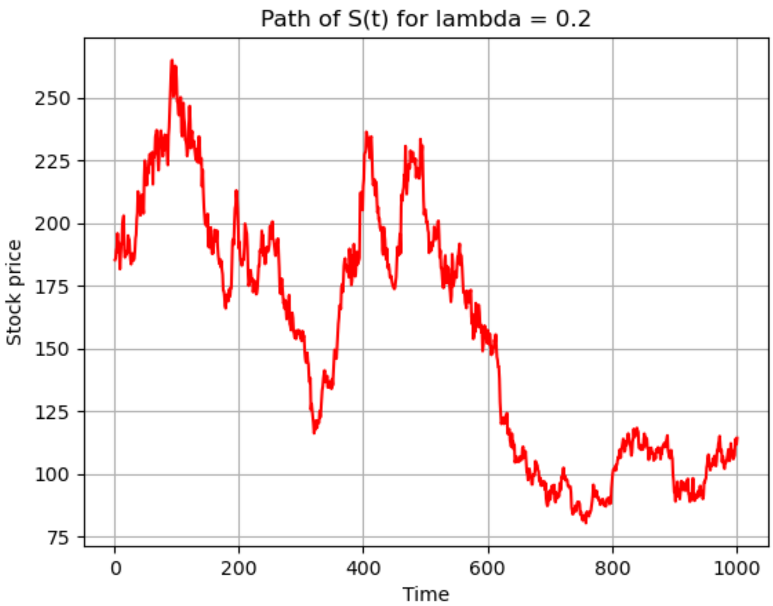
This Lab assignment was done by using the values of μ = 0.0002981060700200021 and $\sigma^2 = 0.00049647536071865l$ and S(0)=185.399994 as calculated in Lab 7. For simulating the jump diffusion model with given condition that the ratio of asset price after and before a jump should follow the log-normal distribution LN(μ , σ^2), I have used the first approach i.e. **Simulating the dates** to generate the path of stock prices S(t).

The path of stock prices S(t) for N ~ Poisson (λ) for given λ values as [0.01, 0.05, 0.1, 0.2] are shown below:









Note: These outputs can vary with time as they are subject to randomness generated by Normal and Poisson processes used in simulating the model.

Reference for data: https://finance.yahoo.com/quote/SBIN.NS/history/