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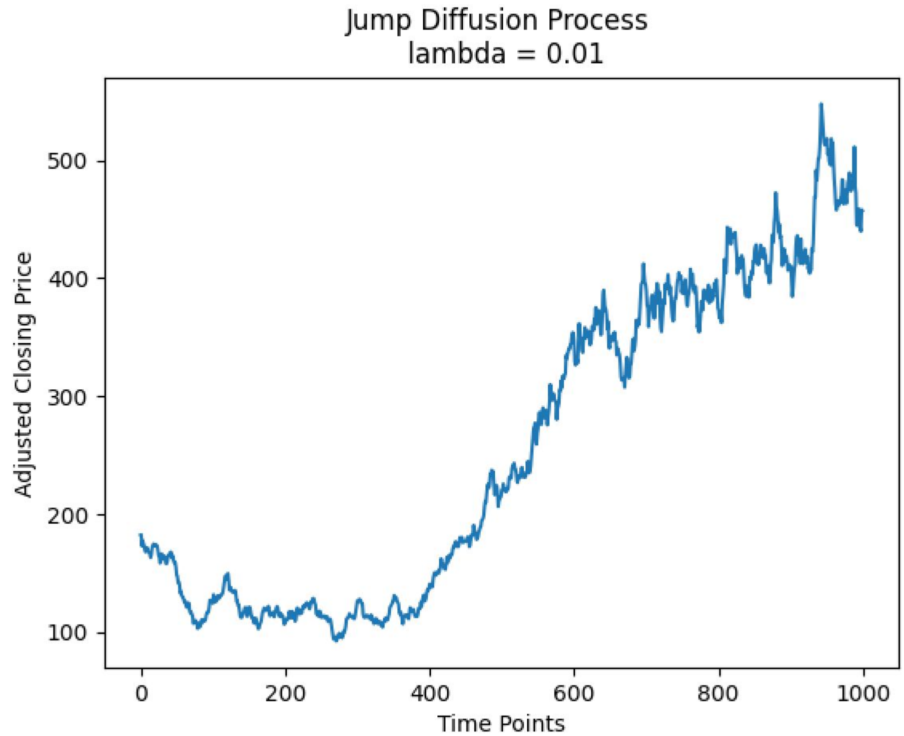
Monte Carlo Simulation
Assignment 8

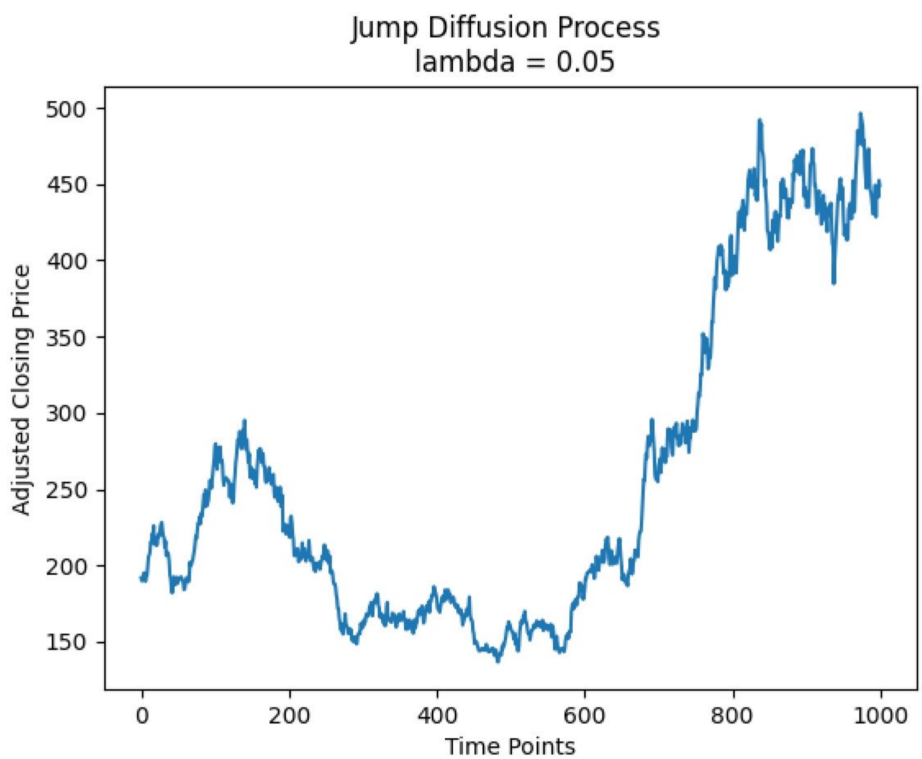
Ques 1:
Tried simulating the adjusted closing price of the asset for a 1000 time points (days) after 30th September, 2020 using the Jump Diffusion Model.

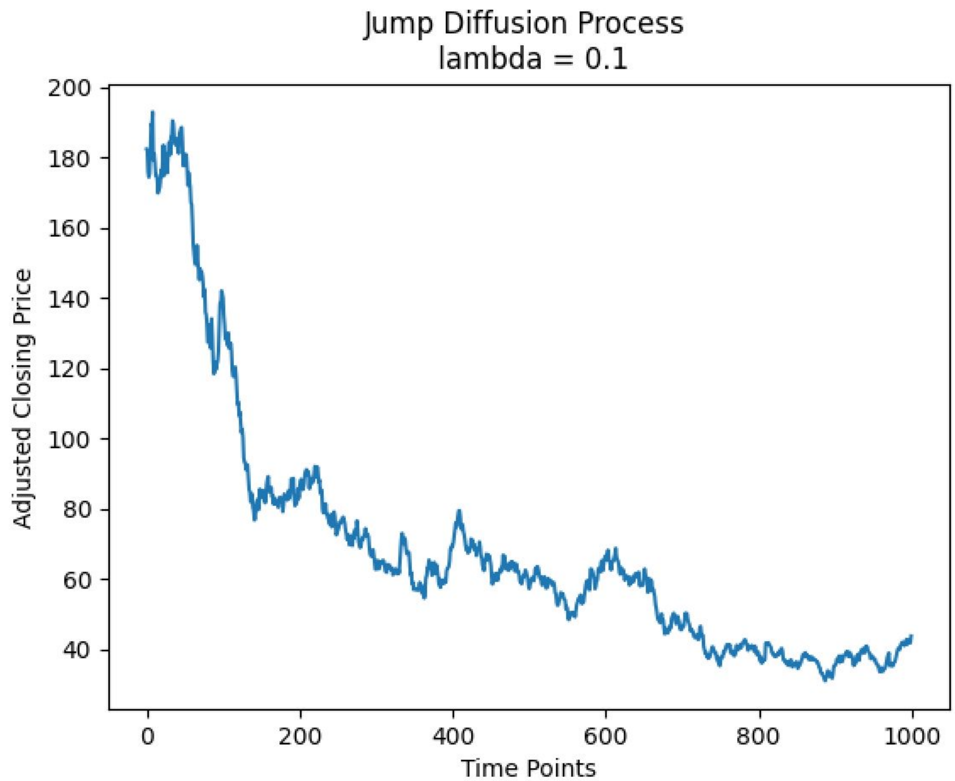
The values of μ = 0.000298, σ = 0.022281, $S(0)$ = 185.39999 were obtained from the previous assignment. Using these values to Simulate Jumps at Fixed Dates for various values of Lambda resulted in the following graphs :

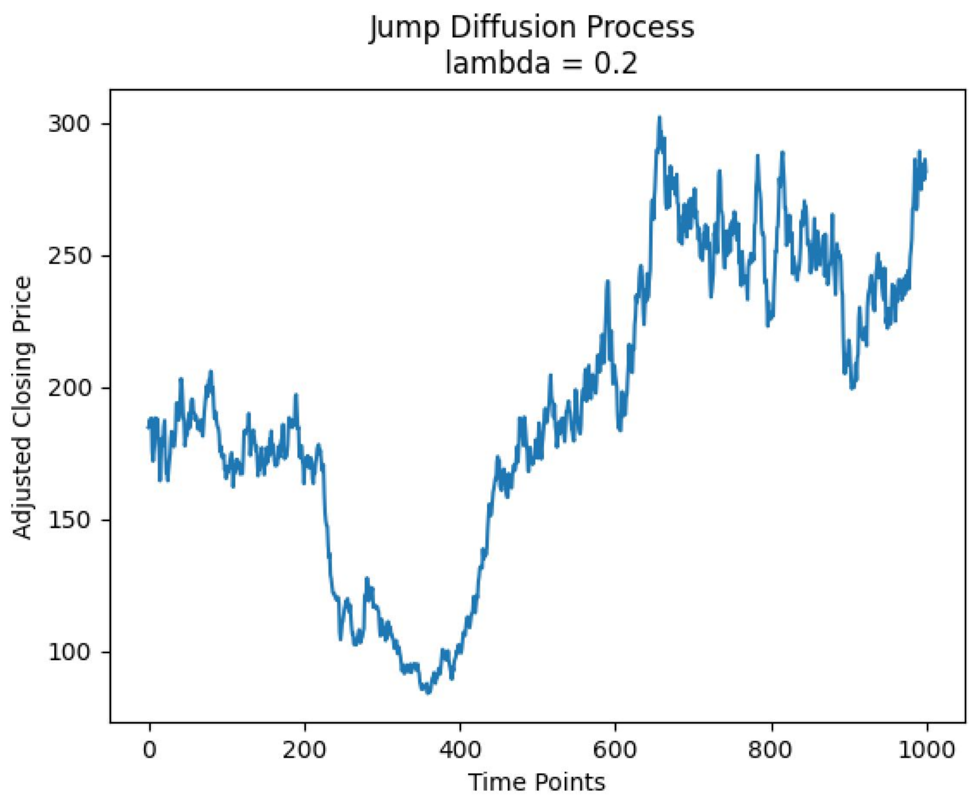
Observations:

- As we increase the value of Lambda, the number of jumps throughout the 1000 day time period increase


Jump Diffusion Process
lambda = 0.01
Adjusted Closing Price
Time Points
100
200
300
400
500
0
200
400
600
800
1000


Jump Diffusion Process
lambda = 0.05
Adjusted Closing Price
Time Points
150
200
250
300
350
400
450
500
0
200
400
600
800
1000


Jump Diffusion Process
lambda = 0.1
Adjusted Closing Price
200
180
160
140
120
100
80
60
40
0
200
400
600
800
1000
Time Points


Jump Diffusion Process
lambda = 0.2
Adjusted Closing Price
300
250
200
150
100
0
200
400
600
800
1000
Time Points