Monte Carlo Simulations (MA323) Lab 7

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Instructions to run the code:-

1) **Place SBIN.NS.csv and 180123021.py in the same folder**
2) **Run the command - python3 180123021.py**

Question 1

The values of μ and σ are generated using the equations:-

$E(u) = (\Sigma^{n}_{i=1} u_i)/n$
$\sigma^2 = (1/(n-1))*(\Sigma^{n}_{i=1} (u_i - E(u))^2)$
$\mu = \sigma^2/2 + E(u)$

The values of μ and σ are:-

$\mu = 0.000298$
$\sigma = 0.022282$

The Stock prices are estimated on October 7, October 14, and October 21 using the initial value S_0 = 185.40 (The stock price on September 30). The estimated values are -

Date	Estimated Stock Price
October 7, 2020	185.60
October 14, 2020	186.40
October 21, 2020	186.00

Question 2

The percentage errors are -

Date	Actual Price	Estimated Price	Percentage Error
October 7, 2020	190.70	185.60	2.67 %
October 14, 2020	200.05	186.40	6.82 %
October 21, 2020	203.75	186.00	8.71 %