Hull White
Term Structure Simulation

Information input:
σ: volatility
a: changing speed of interest rate
timestep: timestep in a year
Length: Simulation period
Forward rate: given a forward rate
Todays: starting date

Using QuantLib to generate
Hull White process required

Monte Carlo simulation:
generate 10 term structures

Asset info. Input
S: asset price
K: option strike price

Monte Carlo simulation:
GBM => Align the term
structure into asset price
simulation

Obtain the payoff of derivative
at the end of the simulation

Calculate the expected return
of their present value to
determine option price

Put and call price