

```
% Define function

function [Sdcall,Sdput] = Helper_table(M,delt)

% Set up values
sigma = 0.2; % volatility
r = 0.05; % risk_free rate
T = 1; % time to expiry
K = 100; % strike price
S0 = 100; % initial asset price
N = T/delt; % number of timesteps
drift = r * delt; % drift
sigma_sqrt_delt = sigma * sqrt(delt);

% Generate random number
randn('state',100);

% Vectorize
S_old = zeros(M,1); % M is number of simulations
S_new = zeros(M,1);
S_old(1:M,1) = S0;

% Timestep loop
for i = 1:N
    S_new(:,1) = S_old(:,1) + S_old(:,1).*(drift+sigma_sqrt_delt*randn(M,1));
    S_new(:,1) = max(0, S_new(:,1)); % check to make sure that S_new cannot be < 0
    S_old(:,1) = S_new(:,1);
end % End of timestep loop

% Define the formula which are used to calculate the standard deviation of
% the value of option
Sdcall = std(exp(-r*T) * (max(S_new-K,0)));
Sdput = std(exp(-r*T) * (max(K-S_new,0)));

end % End of the function
```