```
Exit[]

str[x_] := Table[x[[i * n / 1000]], {i, 1, 1000}]

σ = 0.2; r = 0.04;

n = 5000; dW = RandomReal[NormalDistribution[], {n}] / Sqrt[n];
W = Join[{0}, Accumulate[dW]];
S = Table[Exp[(r - σ^2 / 2) (t - 1) / n + σ W[[t]]], {t, 1, n + 1}];
q[x_] := -2 UnitStep[x] + 1;
P = {0};
For[i = 1, i < n + 1, i++,
 AppendTo[P, P[[i]] - (-2 UnitStep[P[[i]]] + 1) (S[[i + 1]] - S[[i]])];
]
ListLinePlot[{str[P], str[S] - 1}]
```