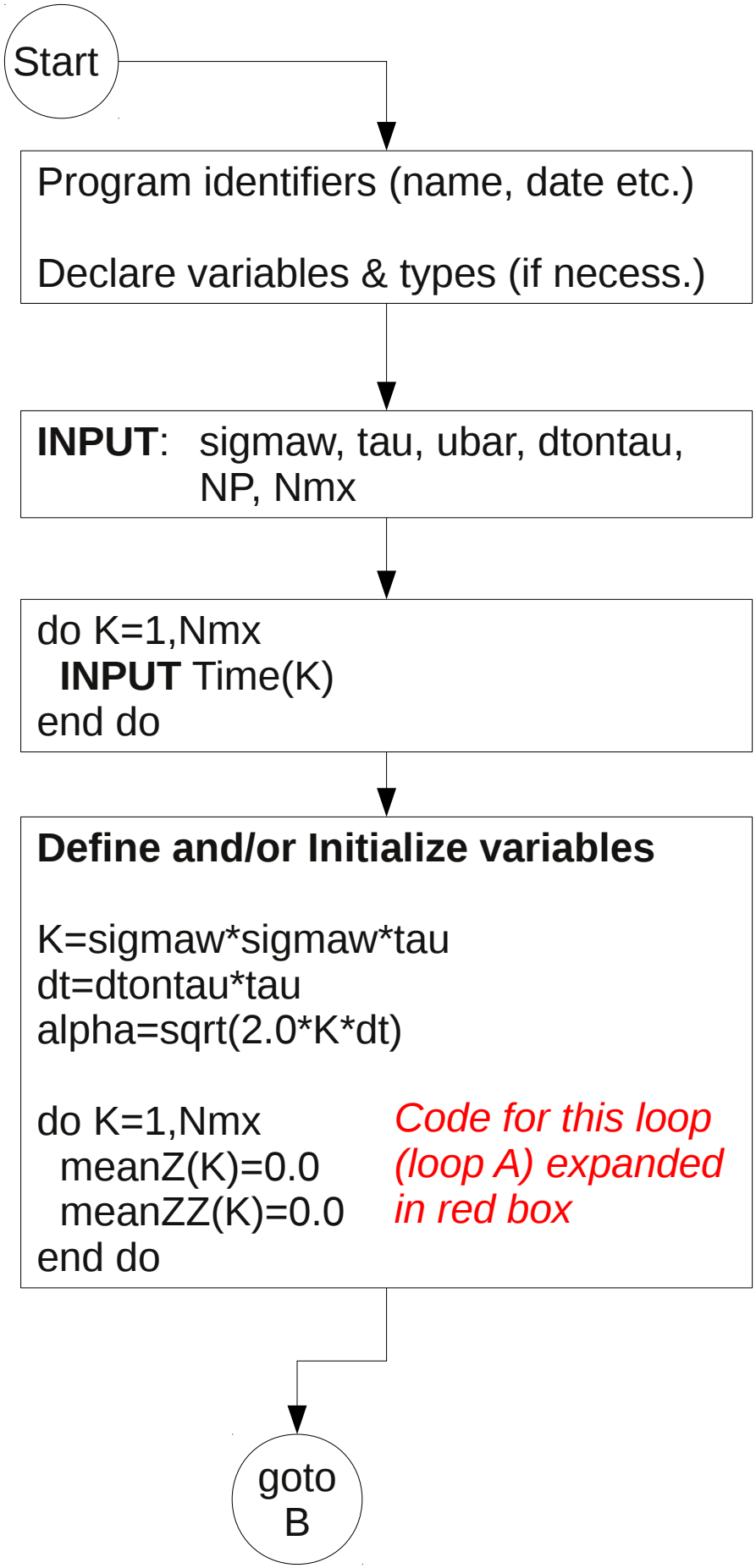
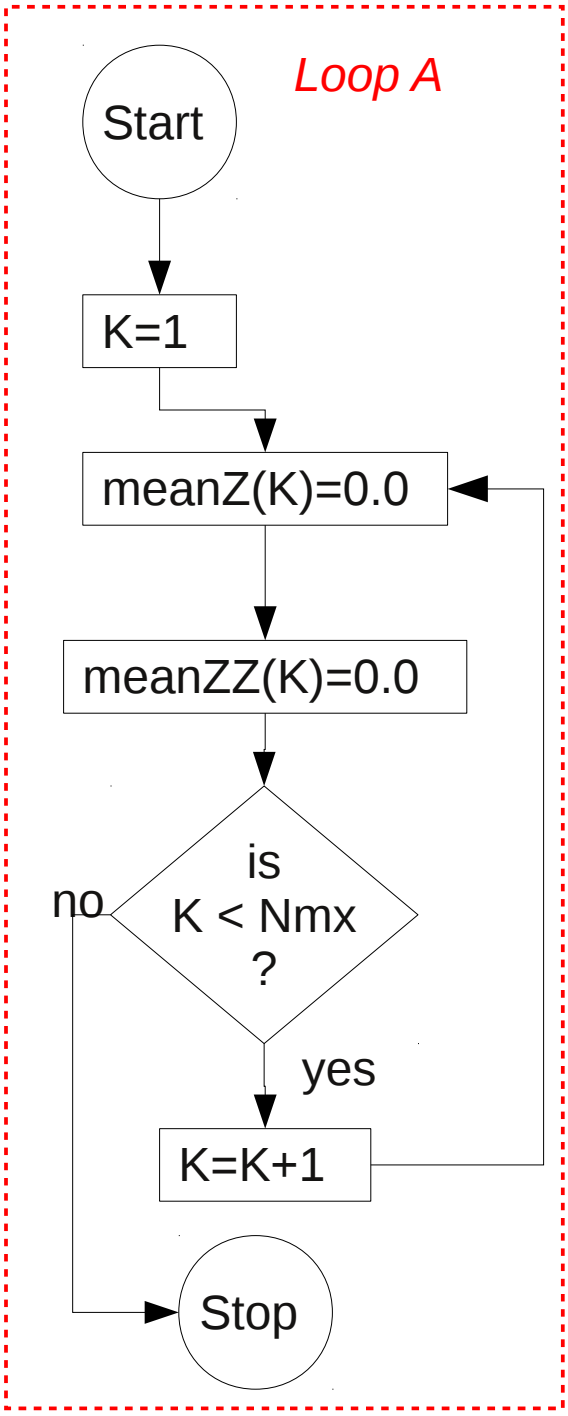
EAS 471. Flowchart for Drunkard's Walk

Note: you may choose to define values of controlling INPUTS within your program, or read them from a parameter file.





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DrunkardWalk_flowchart.odp
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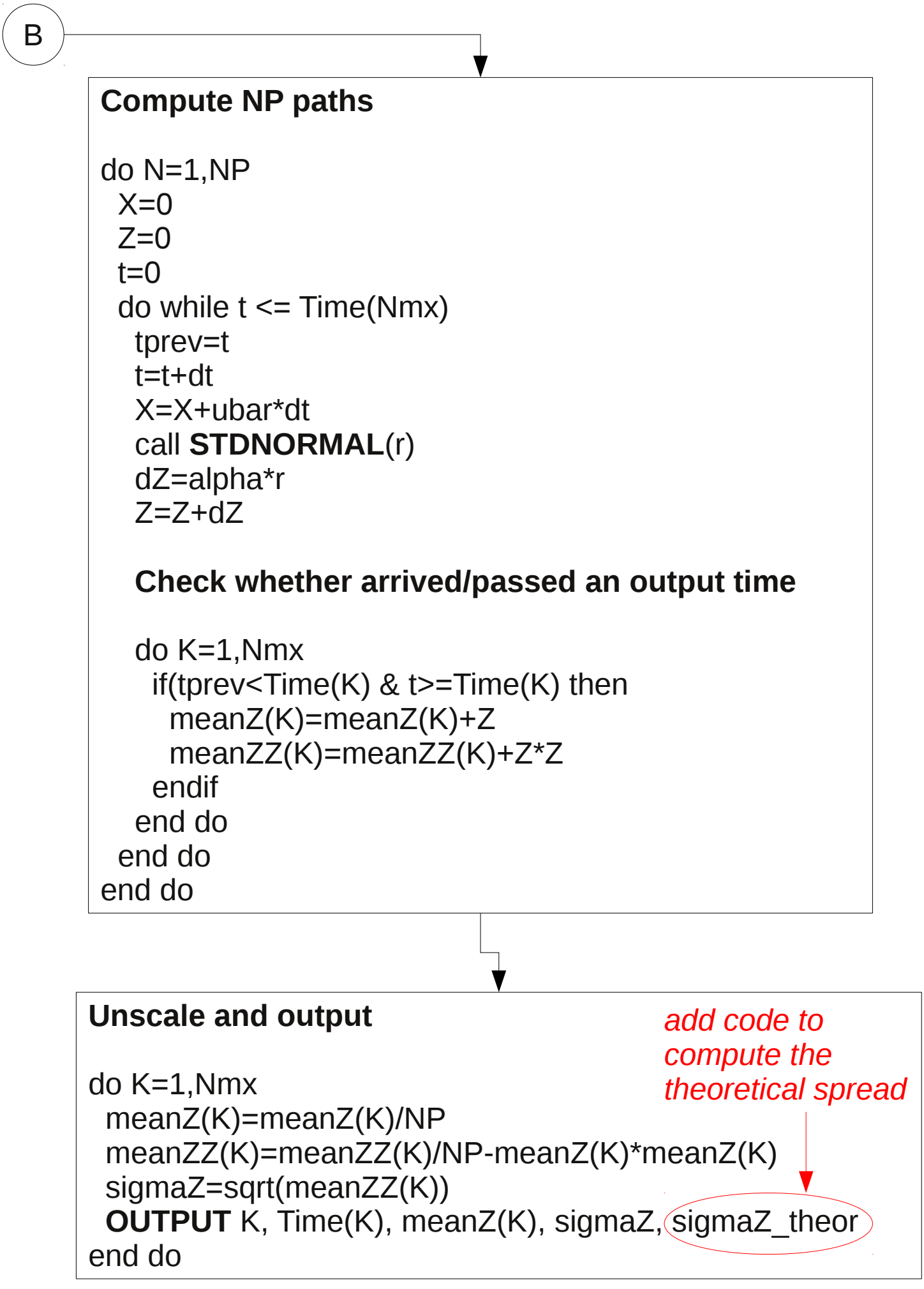
B
Compute NP paths
do N=1,NP
X=0
Z=0
t=0
do while t <= Time(Nmx)
tprev=t
t=t+dt
X=X+ubar*dt
call STDNORMAL(r)
dZ=alpha*r
Z=Z+dZ
Check whether arrived/passed an output time
do K=1,Nmx
if(tprev<Time(K) & t>=Time(K) then
meanZ(K)=meanZ(K)+Z
meanZZ(K)=meanZZ(K)+Z*Z
endif
end do
end do
end do
Unscale and output
add code to compute the theoretical spread
do K=1,Nmx
meanZ(K)=meanZ(K)/NP
meanZZ(K)=meanZZ(K)/NP-meanZ(K)*meanZ(K)
sigmaZ=sqrt(meanZZ(K))
OUTPUT K, Time(K), meanZ(K), sigmaZ, sigmaZ_theor
end do