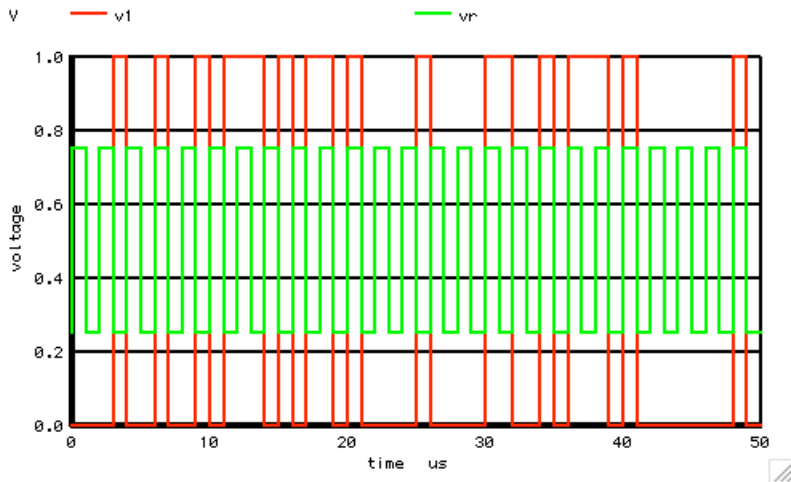


=====**Simple_Digital_Randomness**=====

GENERATE A RANDOM DIGITAL SIGNAL FOR TRANSIENT ANALYSIS.



Simple_Digital_Randomness

```

*=====Need_A_voltage_Source_to_alter=====
V1          v1      0      dc      0
Vref        VR     0      dc      0 PULSE( .25 .75 1n 1n 1n 1u 2u )
.control
set                pensize = 2
echo              "=====Want_20_us_periods====="
let n =            50
let tstep =        1us
echo              "Sample_Period_s = $&tstep"
echo              "=====Create_arrays_====="
unlet pwl_1
unlet noise
unlet ii
let pwl_1 =        vector(4*n)
let noise =        vector(n)
let ii =           vector(1*$&n)
echo              "=====create_Noise_array====="
let index =        0
repeat             $&n
let                noise[index] = pos(rnd(127)-64)
let                index = index + 1
end
*plot             noise vs ii
echo              "=====create_PWL_array====="
pwl_1[0] = 0
pwl_1[1] = noise[0]
pwl_1[2] = tstep -1n
pwl_1[3] = noise[0]
= n-1
let n2
let index =        1
repeat             $&n2
pwl_1[0+4*index] = pwl_1[4*index-4] +tstep
pwl_1[1+4*index] = noise[index]
pwl_1[2+4*index] = pwl_1[0+4*index] +tstep -1n
pwl_1[3+4*index] = noise[index]
let                index = index + 1
end
echo              "=====Install_the_PWL_array====="
alter              @v1[pwl] = pwl_1
echo              "=====Run_and_Plot====="
let period_s =    tstep/2
let period_t =    n*tstep
tran              $&period_s $&period_t 0 $&period_s
plot              v1 vr
.endc
.end

```