I want to replicate the simulations from this paper

DGP I. Unit root processes $\{\rho = 0 \text{ or } .7;\ \psi = 0 \text{ or } .15\}$

$$x_t = 1.0 + x_{t-1} + \rho\{x_{t-1} - x_{t-2}\} + \varepsilon_t$$

$$y_t = 1.0 + y_{t-1} + \rho\{y_{t-1} - y_{t-2}\} + \psi\{x_{t-1} - x_{t-2}\} + \eta_t .$$

I want to generate x and y (and then use them for size/power simulations)

Should I use this Approach 1:

```
FOR !REP=1 TO !NREP
genr x = 1 + x(-1) + rho * (x(-1)-x(-2)) + nrnd
genr y = 1 + y(-1)  + rho * (y(-1)-y(-2)) + psi * (x(-1)-x(-2)) + nrnd
NEXT
```

Or should I use Approach 2:

```
FOR !REP=1 TO !NREP
    model mod1
mod1.append x = 1 + x(-1) + rho * (x(-1)-x(-2)) + nrnd
mod1.append y = 1 + y(-1)  + rho * (y(-1)-y(-2)) + psi * (x(-1)-x(-2)) + nrnd
    mod1.solve
    delete mod1
NEXT
```

(which spits out y_0 and x_0, instead of x and y as above)

What is the difference when generating x and y in case 1 and 2?