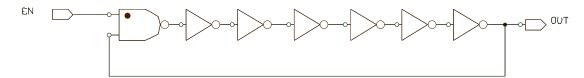
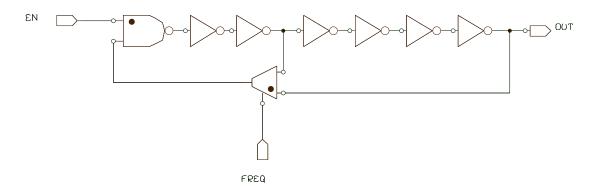
## Simulate ring oscilator (in gate level)

## Basic ring oscillator:



- Describe the circuit in gatelvel.
- Enable input starts the operation.
- Simulation requires models of cells (inverters and nand) to have delays.
- next assignment is design with control on frequency of the output.



This is just a illustration, It will not work in practice. (ring too short).

• can You implement 8 frequencies design based on this idea? The set of frequencies can be linear or geometrical series.