

FDCA Simulator Cheat Sheet

Program Overview:

- 1D Finite Deterministic Cellular Automaton (Wolfram rules)
- Console-based, interactive, cross-platform
- Color-coded display: '#' green (1), '.' gray (0)

Configuration Inputs (Example):

Wolfram rule: 30
Grid size: 20
Number of steps: 40
Boundary type: 1 (periodic)
Initial condition: 0 (single 1 in middle)
Run mode: 2 (auto-delay)
Initial delay (ms): 200

Controls (Auto-Delay Mode):

+ -> Increase speed
- -> Decrease speed
p -> Pause / Resume
[-> Decrease visible history window
] -> Increase visible history window
s -> Save visible window as text (# / .)
c -> Save visible window as CSV (0 / 1)
f -> Save full history as CSV (0 / 1)
t -> Save full history transposed CSV
q -> Quit simulation

Output Formats:

Text (s):

0
1
2#.....

CSV (c / f):

0,0,0,0,1,0,...
1,0,0,1,1,1,...

Transposed CSV (t):

Cell\Step,0,1,2,3,...
0,0,0,0,1,...
1,0,0,1,1,...

Notes:

- Max grid size: 200
- Max history buffer: 50 steps
- ANSI color may not display on pre-Windows 10 consoles
- Suitable for analysis, visualization, and experimentation