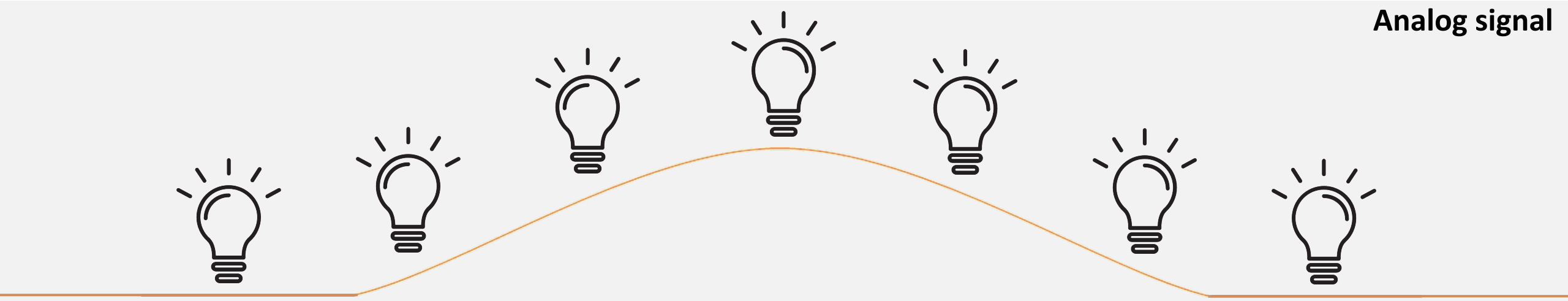
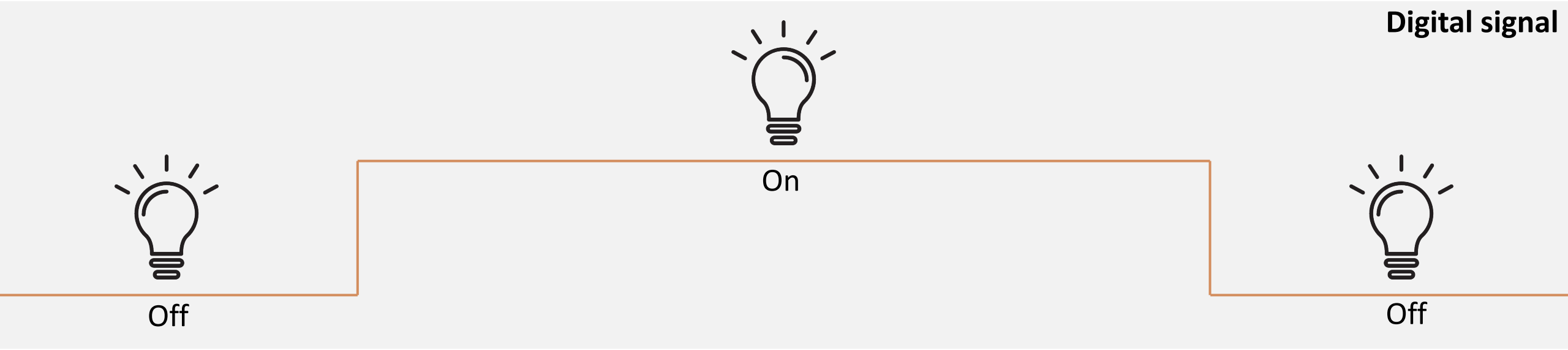
1.1 Number systems

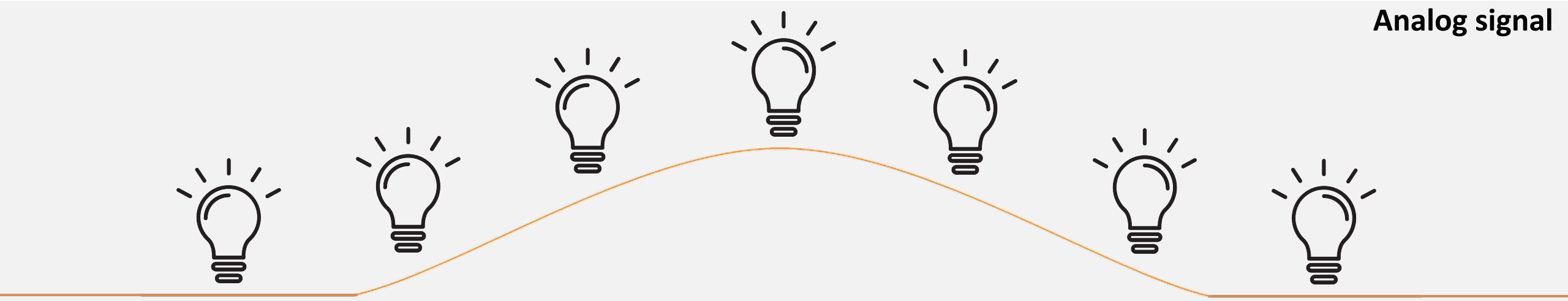
How and why computers use binary to represent all forms of data

Living in an analog world



Living in an analog world





What is binary?

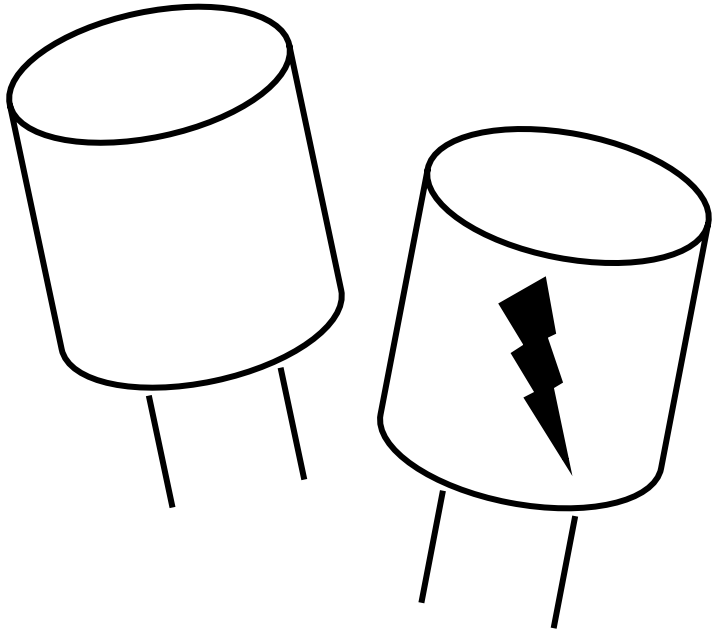
= 0

Off

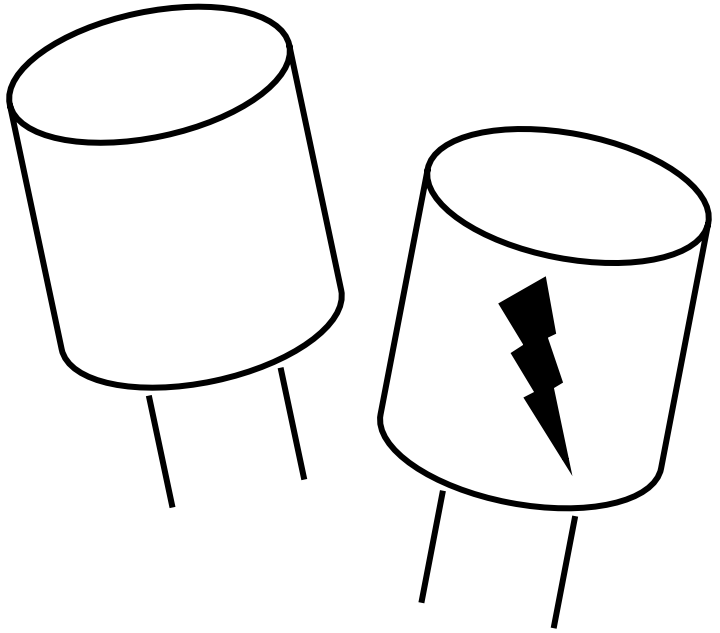
= 1

On

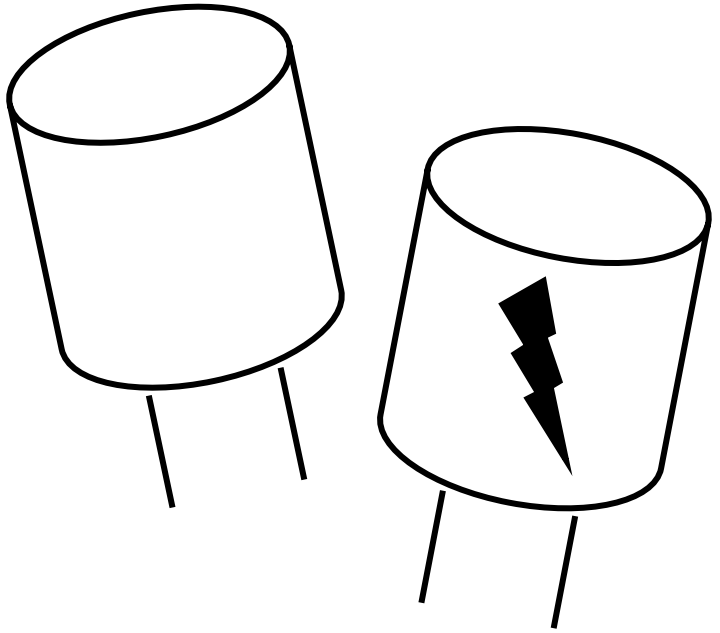
Random-access memory (RAM)



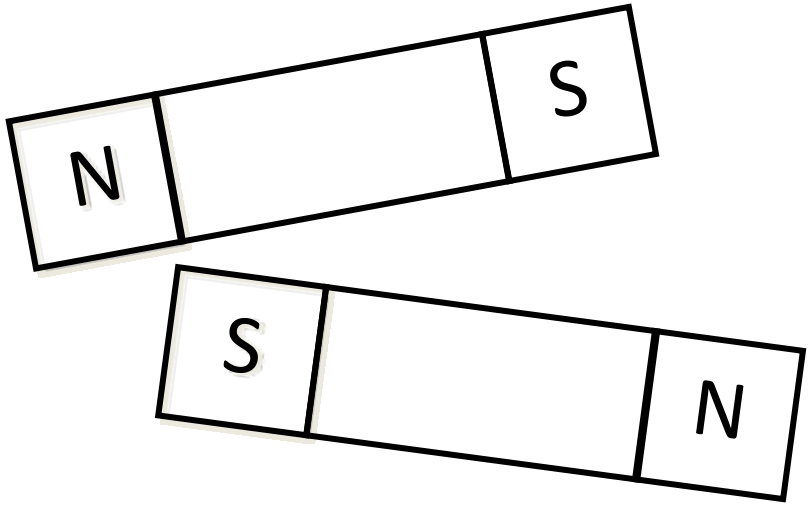
Random-access memory (RAM)



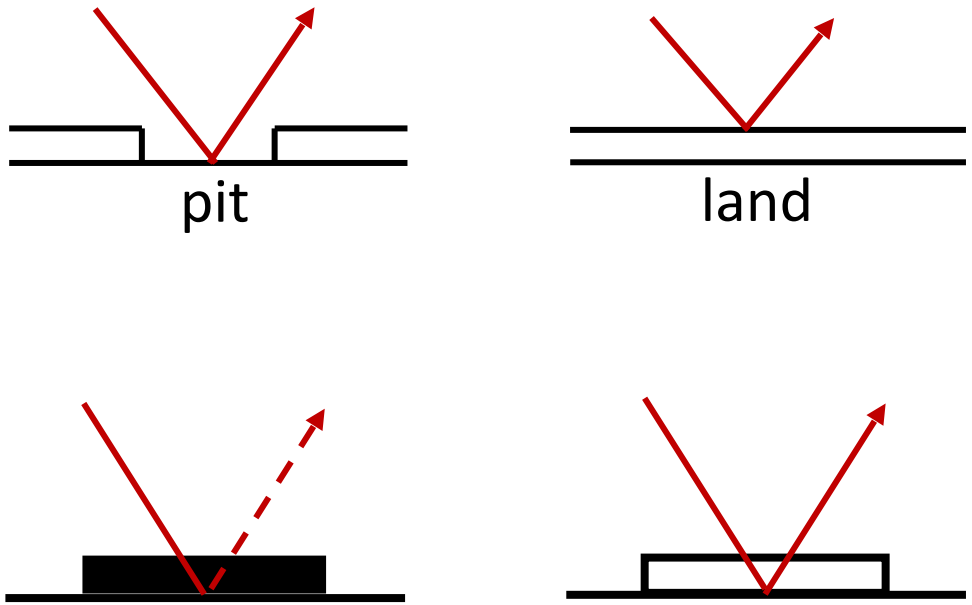
Random-access memory (RAM)



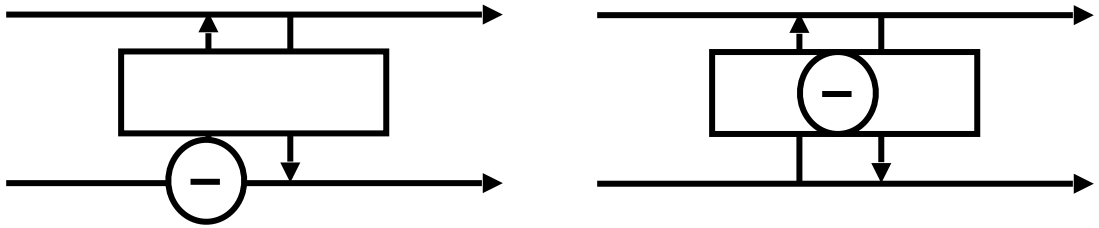
Hard disk



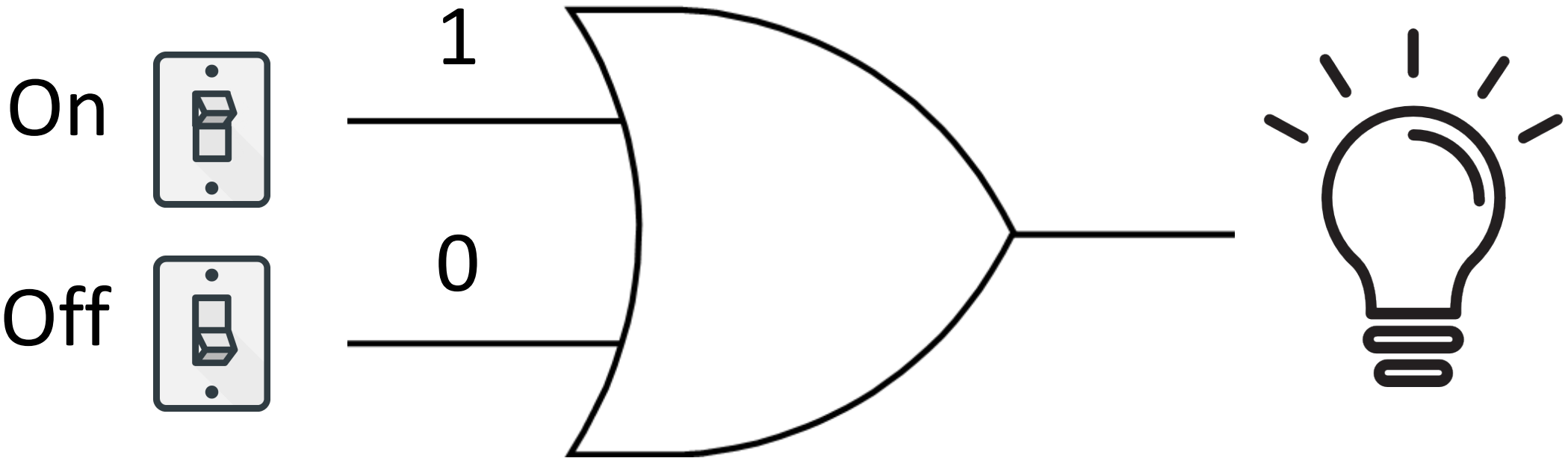
Optical disc



Solid-state memory

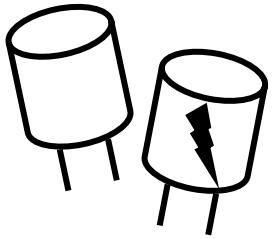


Logic gates



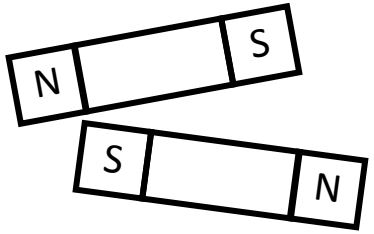
- **With just two states, electronic components are:**
  - Easier to manufacture
  - Therefore cheaper
  - More reliable

- **Examples of using two states to store data:**

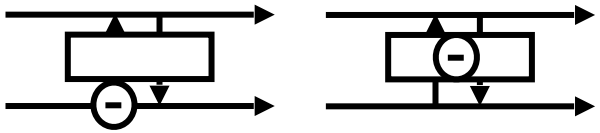


RAM

Optical disc



Hard disk



Flash memory