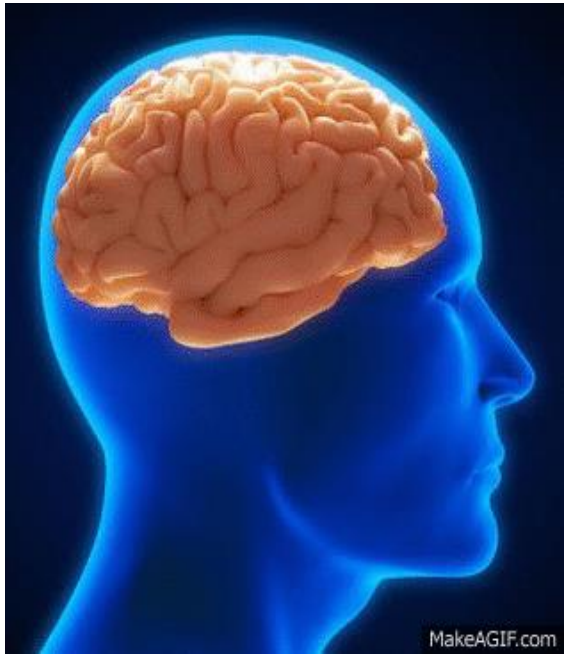
# SNS COLLEGE OF ENGINEERING

(Autonomous)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

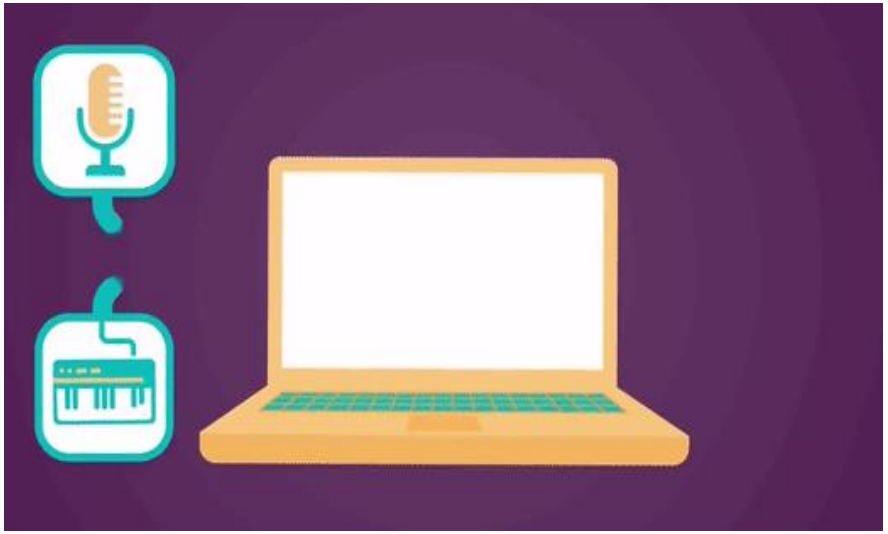
## 19SB405 – MICROPROCESSORS AND ADVANCED MICROCONTROLLERS

## Guess Today's Topic????

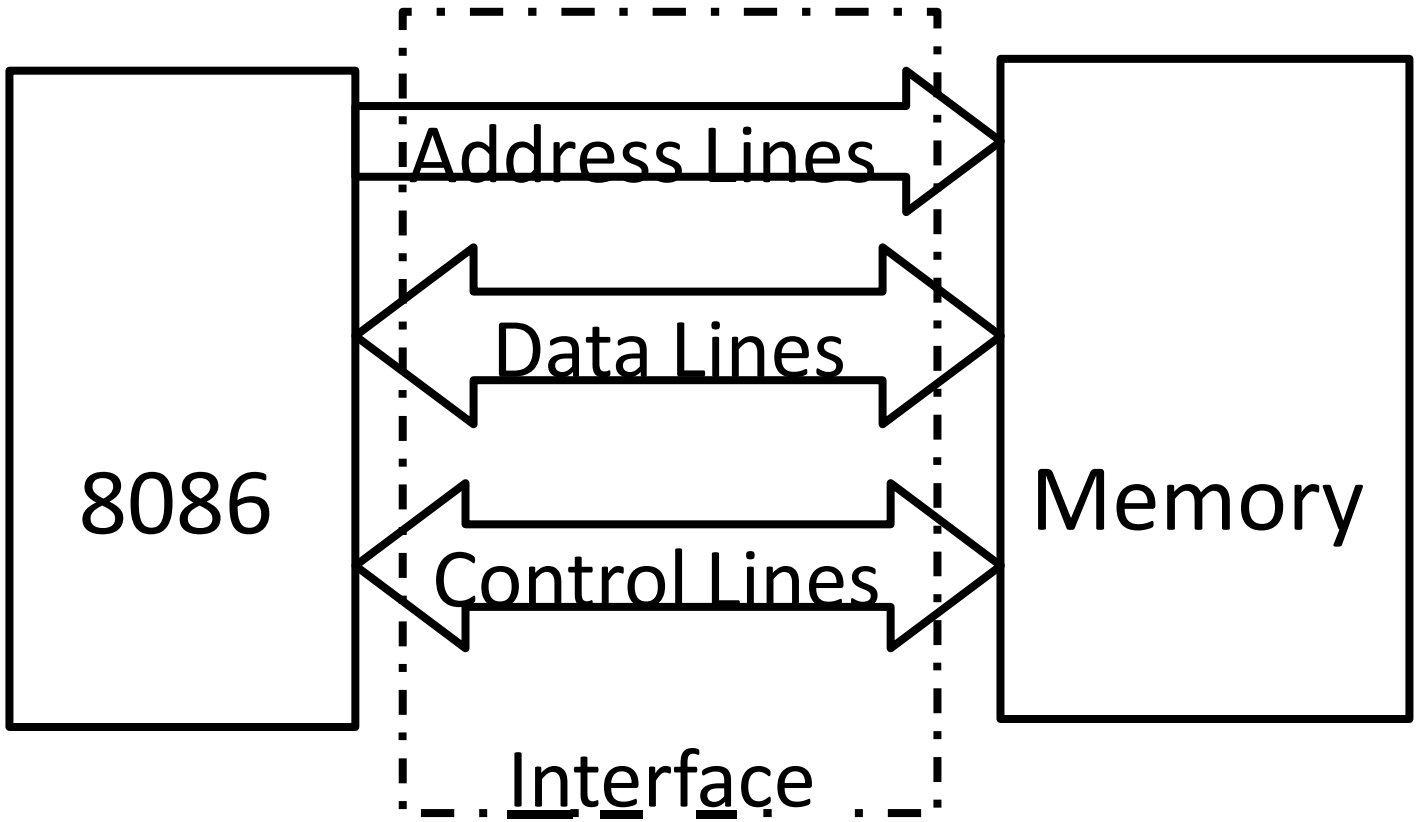


# Memory and I/O Interfacing

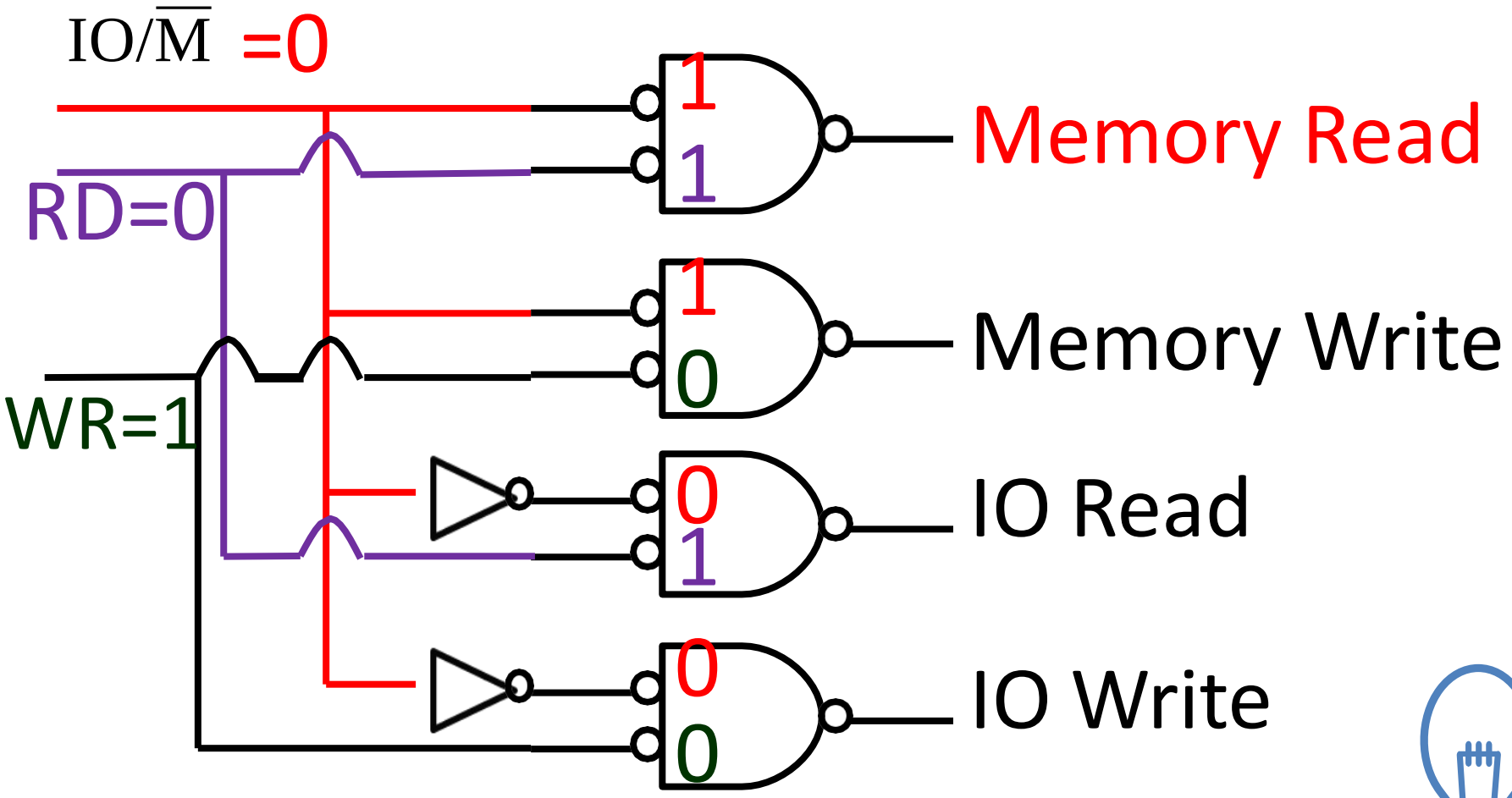
An **interface** is a concept that refers to a point of interaction between components, and is applicable at the level of both hardware and software



# Block Diagram



# Generating Control Signals



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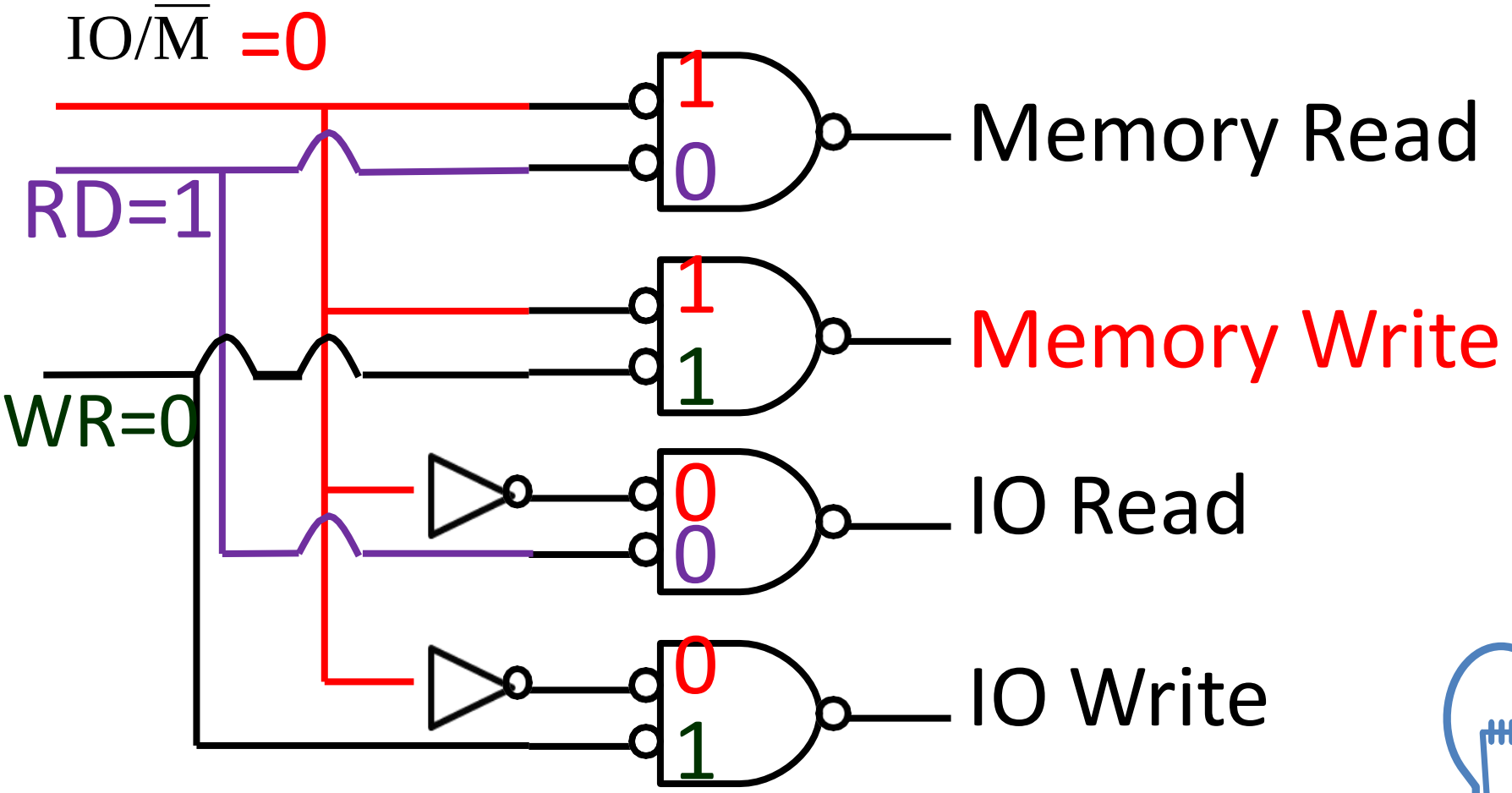

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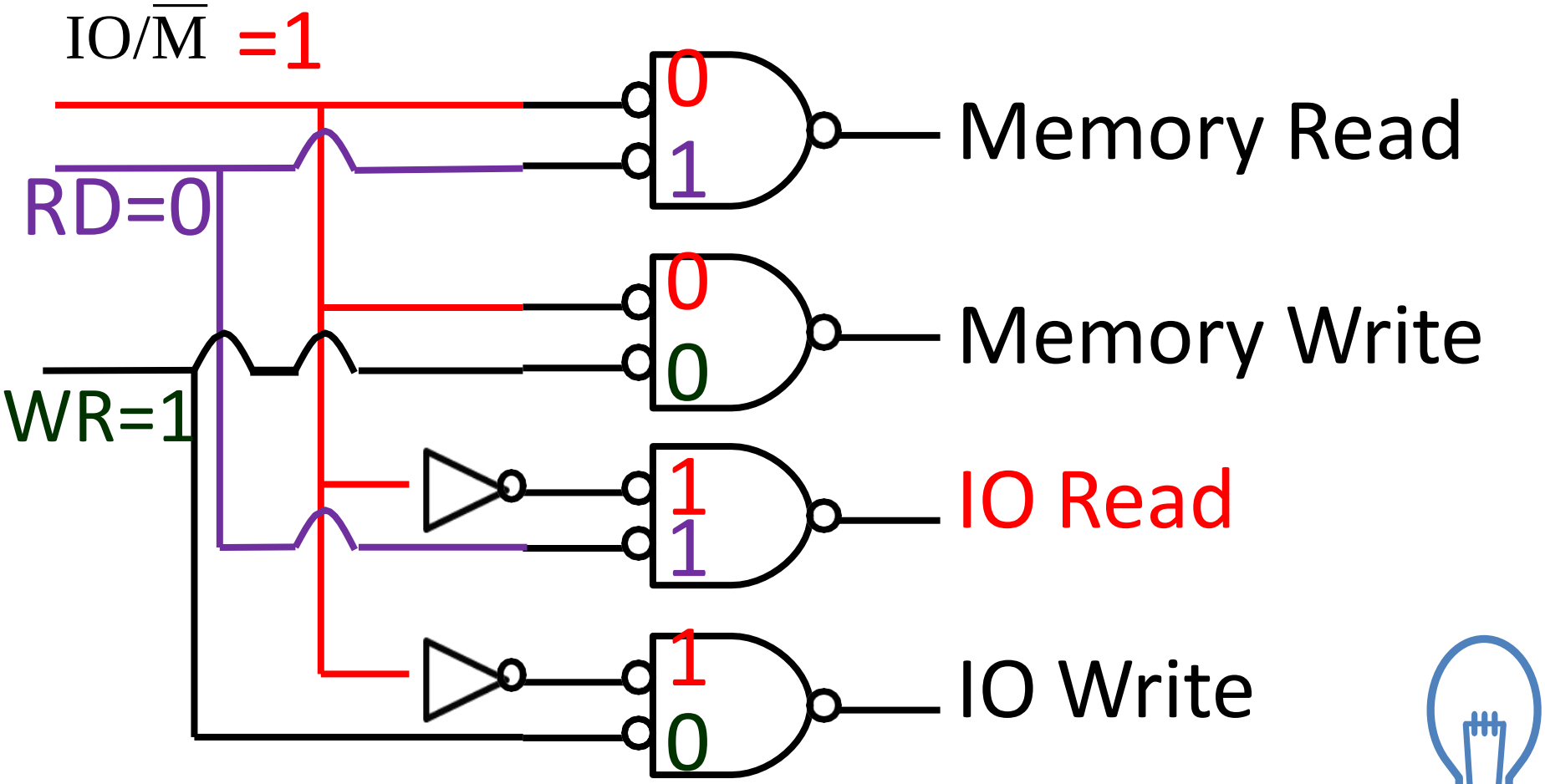

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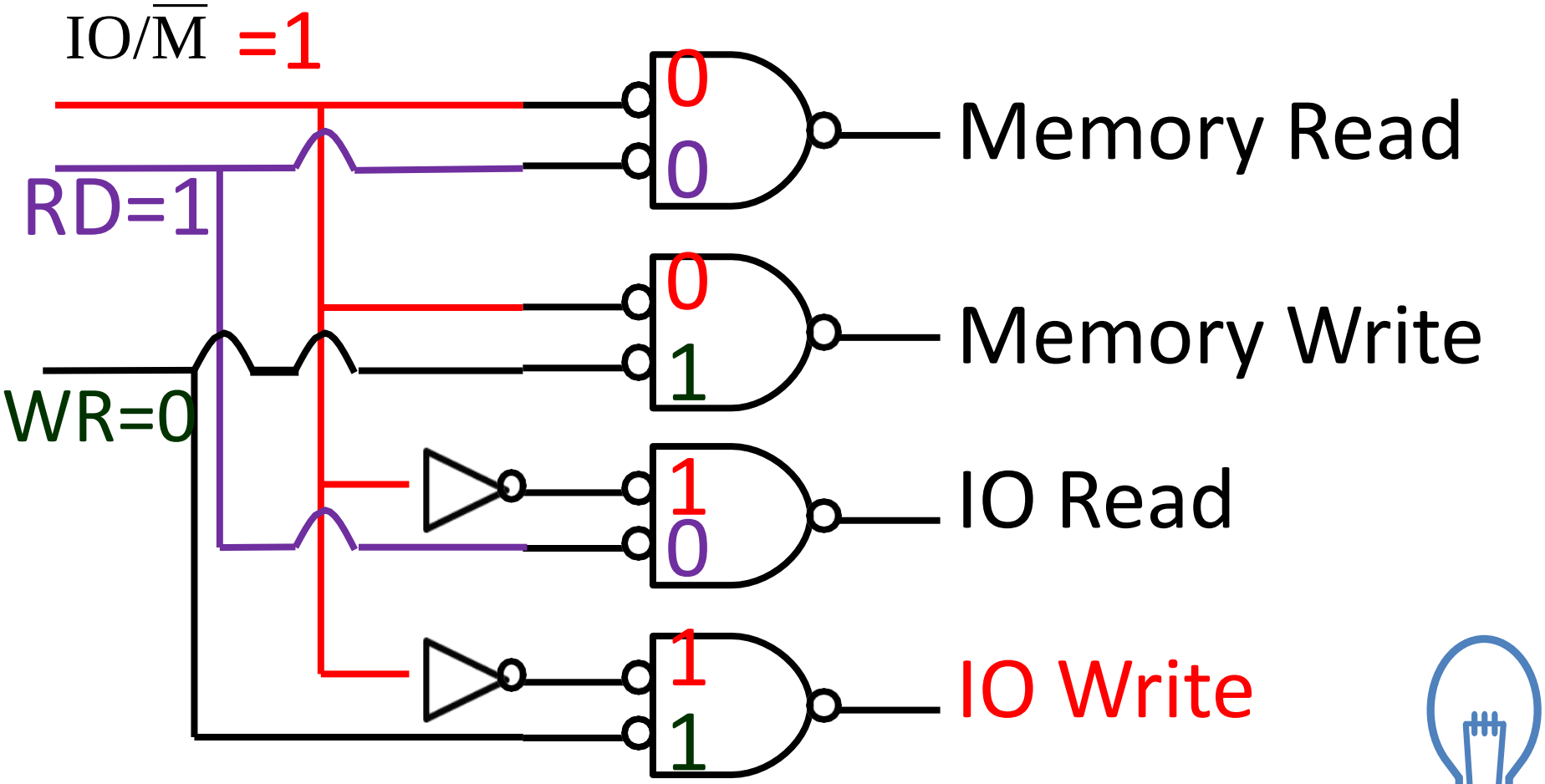
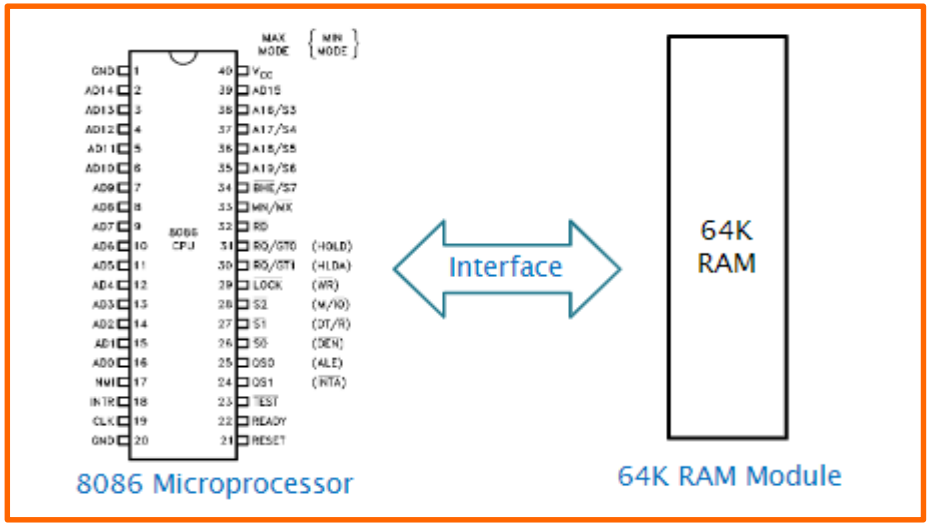


# Memory Interface

- The memory is made up of **semiconductor** material used to **store** the programs and data. The types of memory is,
  - ✓ Primary or main memory
  - ✓ Secondary memory

**Memory Interface**

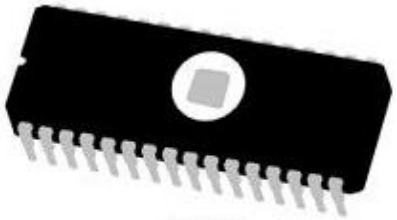


# Primary Memory Interface

- RAM and ROM are examples of this type of memory.
- Microprocessor uses it in storing a program temporarily (commonly called loading) and executing a program.
- Hence the **speed** of this type of memory should be fast.

**Examples of Primary or main memory**

RAM
Random Access Memory



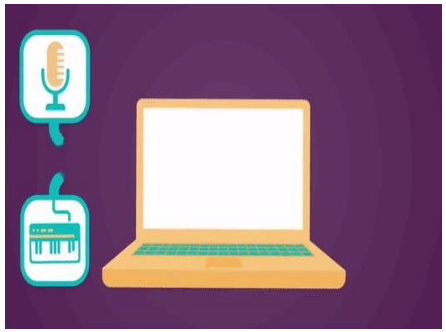
ROM
Read only Memory

# Secondary Memory Interface

- These are used for bulk storage of data and information.
- The main examples include Floppy, Hard Disk, CD-ROM, Magnetic Tape etc.
- Slower and Sequential Access Nature.
- non-volatile nature.

**Examples of Secondary Memory**

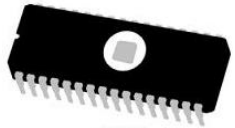
Assessment



Explain Interface?

**Example of Secondary Memory Interface**

RAM
Random Access Memory



ROM
Read only Memory

**Example of Primary Memory Interface**

Hard disk

Floppy Disk

THANK YOU