



Republic of Iraq  
Ministry of Higher Education and  
Scientific Research  
Al-Furat Al-Awsat Technical University  
Engineering Technical College/Najaf  
Al Najaf Al Ashraf, 31001. Iraq.

# 8085 Microprocessor

## *Lecture 1*

المدرس ضرغام الخفاف الاسدي

Third Year lecture notes

Avionics Engineering Dept.

Engineering Technical College/ NAJAF 2020-2021

Lecturer: Dhurgham Al-Khaffaf Alasady

- **Microprocessor:-**The microprocessor is a semi programmable logic device that can be used to control processes.it can also be used as a data processing device or a computing unit of a computer.8085 is 8 bit microprocessor that can access 8 bits of data and 16 bit address line used to fetch approximately 64k memory location internally.

# Difference between microprocessor and microcontroller

- **Microprocessor** is an IC which has only the CPU inside them i.e. only the processing powers. These microprocessors don't have RAM, ROM, and other peripheral on the chip. A system designer has to add them externally to make them functional. Application of microprocessor includes Desktop PC's, Laptops, notepads etc.

- Microcontroller has a CPU, in addition with a fixed amount of RAM, ROM and
- other peripherals all embedded on a single chip. At times it is also termed as a mini computer or a computer on a single chip. Microcontrollers are designed to perform specific tasks. Specific means applications where the relationship of input and output is defined. Depending on the input, some processing needs to be done and output is delivered. For example, keyboards, mouse, washing machine, remote, microwave, cars, bikes, telephone, mobiles, watches, etc. Since the applications are very specific, they need small resources like RAM, ROM, I/O ports etc and hence can be embedded on a single chip.

- Microprocessor find applications where tasks are unspecific like developing software, games, websites, photo editing, creating documents etc. In such cases the relationship between input and output is not defined. They need high amount of resources like RAM, ROM, I/O ports etc.
- The clock speed of the Microprocessor is quite high as compared to the
- microcontroller. Whereas the microcontrollers operate from a few MHz to 30 to 50 MHz, today's microprocessor operate above 1GHz as they perform complex task.

Thank you