

Week-10

Microprocessors, Micro-controllers and Assembly Language
Sessional

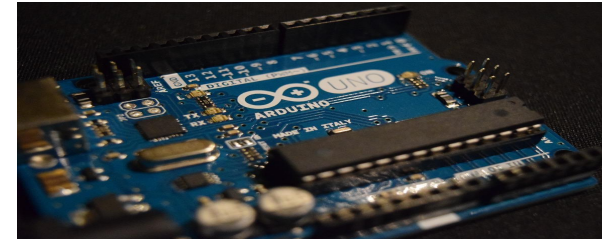
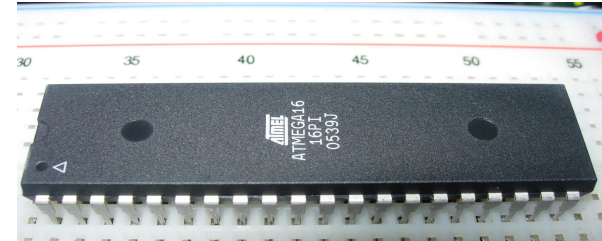
Topics

- Microprocessors, Micro-controllers
- Proteus Design Suite
- Arduino
- Pin Diagram

Microprocessors, Micro-controllers



Microprocessors



Micro-controllers

Microprocessors, Micro-controllers

- Microprocessor consists of only a CPU and Micro-controller contains a CPU, Memory, I/O all integrated into one chip.
- Microprocessor is used in PCs and Micro-controller is used in an embedded system.
- Microprocessor is complicated and expensive but Micro-controller is inexpensive and straightforward.

Proteus

- Proteus is a electrical suite for circuit simulation purposes.
- Proteus Download Link:
https://drive.google.com/file/d/1aQ-QefxwPn7Coc0X_xKwAKFt6r3PQLiD/view
- Arduino IDE: <https://downloads.arduino.cc/arduino-nightly-windows.zip>
- Arduino Uno datasheet: <https://www.farnell.com/datasheets/1682209.pdf>

Arduino Uno

- Arduino is an open-source hardware and software company that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices.
- The Arduino Uno is a microcontroller board based on the ATmega328.

Arduino Uno

Pin Diagram

- 14 digital input/output pins (of which 6 can be used as PWM outputs)
- 6 analog inputs
- One UART interface found on pin 0 (RX0) and pin 1 (TX0)
- One I2C/TWI module
- And a SPI bus

