Module 2-5

SETTING UP THE ARDUINO IDE:
Hello World
What’s So Great About Serial?
Serial vs Parallel
Serial Communications in Embedded

Serial Communication Protocols

- I2C
- RS232
- SPI
- RS485
- USB
- RS422
- Microwire
- CAN
PC Communications Before
PC Communications Now

PC

USB Serial Bridge
CH340

Transmit
Receive

MCU

Receive
Transmit

USB
Hello World

• Goal: Communicate with a PC by printing out “Hello World” on it

• Why do we care?
  • Very useful for software development
  • Can create GUI (Graphical User Interfaces) to communicate with device
  • Automation
Hello World

• Functions:
  • `Serial.begin(baudrate)`
    • Initializes Serial port with given baudrate for communications between PC and board

• `Serial.print(text)`
  • Prints the specified text to the serial console

• `Serial.println(text)`
  • Prints the specified text to the serial console with a carriage return (newline)
void setup()
{
    Serial.begin(57600);
    Serial.print("Hello Sketch v");
    Serial.println("1.0");
}

void loop()
{
    Serial.println("Hello World");
    delay(1000);
}
COMING UP

Module 3

Programming The WildLogger