

## Exercise 5: Serial monitor (read/write)

### Equipment

For this exercise you will need:

- 1 x Arduino Uno

Remember to match the baud rate between the serial monitor and your program!

### Reading

Chapter 3 & 4

### Setup

- Just connect the Uno to your computer. I bet it already was connected :)

### Questions & Exercises

**5a:** Read the following code, try to explain what it does. See [Serial.available\(\)](#) and [Serial.read\(\)](#) for more info.

```
int incomingByte = 0;

void setup() {
  Serial.begin(9600);
}

void loop() {
  if (Serial.available() > 0) {
    incomingByte = Serial.read();
    Serial.print("I received: ");
    Serial.println(incomingByte, DEC);
  }
}
```

**5b:** Implement the code in your own IDE.

**5c:** Open the serial monitor (**ctrl+shift+m**), and set it to "no line ending". Send some data using the top line of the serial monitor.

**5d:** Why are you not receiving what you wrote? (e.g. G becomes 71)

**5e:** What happens if the serial monitor sends a line ending?

**5f:** Try changing the line `Serial.print(incomingByte, DEC)` to `Serial.print((char)incomingByte)`. What happens? Why?

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### Hint

[Click here](#) if you need help