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Serial.print()

Description

Prints data to the serial port as human-readable ASCII text. This command can tak many forms. Numbers are printed using an ASCII character for each digit. Floats a similarly printed as ASCII digits, defaulting to two decimal places. Bytes are sent as single character. Characters and strings are sent as is. For example-

- Serial.print(78) gives "78"
- Serial.print(1.23456) gives "1.23"
- Serial.print('N') gives "N"
- Serial.print("Hello world.") gives "Hello world."

An optional second parameter specifies the base (format) to use; permitted values BIN(binary, or base 2), OCT(octal, or base 8), DEC(decimal, or base 10), HEX(hexadecimal, or base 16). For floating point numbers, this parameter specifies number of decimal places to use. For example-

- Serial.print(78, BIN) gives "1001110"
- Serial.print(78, OCT) gives "116"
- Serial.print(78, DEC) gives "78"
- Serial.print(78, HEX) gives "4E"
- Serial.print(1.23456, 0) gives "1"
- Serial.print(1.23456, 2) gives "1.23"
- Serial.print(1.23456, 4) gives "1.2346"

You can pass flash-memory based strings to serial.print() by wrapping them with For example:

Serial.print(F("Hello World"))

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To send data without conversion to its representation as characters, use Serial.wri

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Parameters

Serial: serial port object. See the list of available serial ports for each board on the Serial main page.

val: the value to print. Allowed data types: any data type.

Returns

print() returns the number of bytes written, though reading that number is optior
Data type: size_t.

Example Code

```
Uses a for loop to print numbers in various formats.
void setup() {
 Serial.begin(9600); // open the serial port at 9600 bps:
void loop() {
 // print labels
 Serial.print("NO FORMAT"); // prints a label
 Serial.print("\t");
                              // prints a tab
 Serial.print("DEC");
 Serial.print("\t");
 Serial.print("HEX");
 Serial.print("\t");
 Serial.print("OCT");
 Serial.print("\t");
 Serial.print("BIN");
 Serial.println();
                           // carriage return after the last label
 for (int x = 0; x < 64; x++) { // only part of the ASCII chart, change to suit
   // print it out in many formats:
   Serial.print(x);
                          // print as an ASCII-encoded decimal - same as "DEC"
   Serial.print("\t\t"); // prints two tabs to accommodate the label length
   Serial.print(x, DEC); // print as an ASCII-encoded decimal
   Serial.print("\t");
                           // prints a tab
   Serial.print(x, HEX); // print as an ASCII-encoded hexadecimal
   Serial.print("\t");
                           // prints a tab
   Serial.print(x, OCT); // print as an ASCII-encoded octal
   Serial.print("\t");
                          // prints a tab
   Serial.println(x, BIN); // print as an ASCII-encoded binary
   // then adds the carriage return with "println"
   delay(200);
                           // delay 200 milliseconds
 Serial.println();
                           // prints another carriage return
}
                                                                     Help
```

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