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GLOSSARY

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Doubts on how to use Github? Learn everything you need to know in this tutorial.

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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"))
```

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

Help

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 accomodate 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

See also

LANGUAGE begin()

LANGUAGE end()

LANGUAGE available()

LANGUAGE read()

LANGUAGE peek()

LANGUAGE flush()

LANGUAGE println()

LANGUAGE write()

LANGUAGE SerialEvent()

LANGUAGE Memory