

TOML Quick Reference

Tables, strings, numbers, dates, arrays

Syntax

Basic Rules

key = value	Key-value pair (one per line)
#	Comment (to end of line)
Case sensitive	Keys and values are case-sensitive
UTF-8	Files must be valid UTF-8
No null	TOML has no null type

Minimal Example

```
title = "My App"
debug = true
port = 8080
```

Strings

String Types

"basic"	Basic string (supports escapes)
'literal'	Literal string (no escapes)
"""multi"""	Multi-line basic string
'''multi'''	Multi-line literal string

Examples

```
basic = "Hello\nWorld"
literal = 'C:\Users\path'
multi = """
Line one
Line two"""
```

Escape Sequences

\n \t \r	Newline, tab, carriage return
\\	Backslash
\uXXXX	Unicode (4-digit hex)
\UXXXXXXXX	Unicode (8-digit hex)

Numbers & Booleans

Numeric Types

42	Integer
1_000_000	Integer with underscores
0xff / 0o77 / 0b11	Hex, octal, binary
3.14	Float
5e+22 / 1e-2	Scientific notation
inf / nan	Special float values
true / false	Boolean (lowercase only)

Examples

```
count = 42
price = 19.99
hex_color = 0xFF5733
enabled = true
```

Dates

Date & Time Types

2026-03-26T10:30:00Z	Offset date-time (UTC)
2026-03-26T10:30:00-05:00	Offset date-time (EST)
2026-03-26T10:30:00	Local date-time (no timezone)
2026-03-26	Local date
10:30:00	Local time

Examples

```
created = 2026-03-26T10:30:00Z
birthday = 1990-05-15
alarm = 07:00:00
```

Tables

Table Syntax

```
[server]
host = "localhost"
port = 8080

[server.ssl]
enabled = true
cert = "/path/to/cert.pem"
```

Array of Tables

```
[[users]]
name = "Alice"
role = "admin"

[[users]]
name = "Bob"
role = "user"
```

Rules

[name]	Standard table header
[a.b.c]	Dotted key — nested table
[[name]]	Array of tables
No redefine	Cannot define same table twice

Arrays

Array Syntax

```
colors = ["red", "green", "blue"]
numbers = [1, 2, 3]
```

Multi-line Array

```
hosts = [
  "alpha.example.com",
  "beta.example.com",
]
```

Trailing comma is allowed in TOML arrays

Rules

Same type	All elements must be the same type
Trailing comma	Allowed after last element
NewLines	Arrays can span multiple lines

Inline Tables

Inline Table Syntax

```
point = { x = 1, y = 2 }
user = { name = "Alice", admin = true }
```

Rules

Single line	Must appear on one line
No trailing comma	Trailing comma not allowed
No newlines	Cannot span multiple lines
No adding keys	Cannot add keys to inline table later

Inline vs Standard

```
# Inline — compact, one-liners
db = { host = "localhost", port = 5432 }
# Standard — readable, extendable
[db]
host = "localhost"
port = 5432
```

Common Patterns

pyproject.toml

```
[project]
name = "myapp"
version = "1.0.0"
dependencies = ["flask>=3.0"]
```

Cargo.toml

```
[package]
name = "myapp"
version = "0.1.0"
edition = "2021"
```

Tips

taplo	TOML toolkit — formatter and linter
No null	Omit the key instead of setting null
No anchors	Unlike YAML, no reference/alias system
Strict	No duplicate keys, no mixed-type arrays