

# TOML Quick Reference

Tables, strings, numbers, dates, arrays

## Syntax

### Basic Rules

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

### Minimal Example

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

## Strings

### String Types

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

### Examples

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

### Escape Sequences

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

## Numbers & Booleans

### Numeric Types

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

### Examples

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

## Dates

### Date & Time Types

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

<b>[name]</b>	Standard table header
<b>[a.b.c]</b>	Dotted key — nested table
<b>[[name]]</b>	Array of tables
<b>No redefine</b>	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

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

## Inline Tables

### Inline Table Syntax

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

### Rules

<b>Single line</b>	Must appear on one line
<b>No trailing comma</b>	Trailing comma not allowed
<b>No newlines</b>	Cannot span multiple lines
<b>No adding keys</b>	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

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