

# Data Types in Solidity Smart Contract

Part 22 - String Literals and Types, Unicode Literals,  
Hexadecimal Literals, and Enums

# Overview

String Literals and Types

Unicode Literals

Hexadecimal Literals

Enums

# String Literals and Types

## String literals

- Only ASCII characters
- Visual and practical splitting
- No trailing zeros
- Convertible to
  - bytesN
  - bytes
  - string

## Escape characters

# Unicode Literals

Any valid UTF-8 sequence

- *Unicode Transformation Format, 8-bit*

Declaration

- Literal prefixed with a `unicode` keyword

Escape characters

- Same set as with string literals

# Hexadecimal Literals

Prefix hex + ordinary string literal

- Single ' ' or double " " quotes enclosure

Content representation

- Hexadecimal digits
- Optional \_ (underscore) symbol separator at byte boundaries

Value = binary representation of the hexadecimal sequence

Same convertibility restrictions as with string literals

# Enums

A user-defined type

Convertible to and from integers

- Only explicit conversion, exclusively during runtime
- Check failure = Panic error

Declaration defaults to the first element

- Zero-based indexing, up to 256 members

Type properties

- `type(NameOfEnum).min` and `type(NameOfEnum).max`