YAML

Yet another markup language

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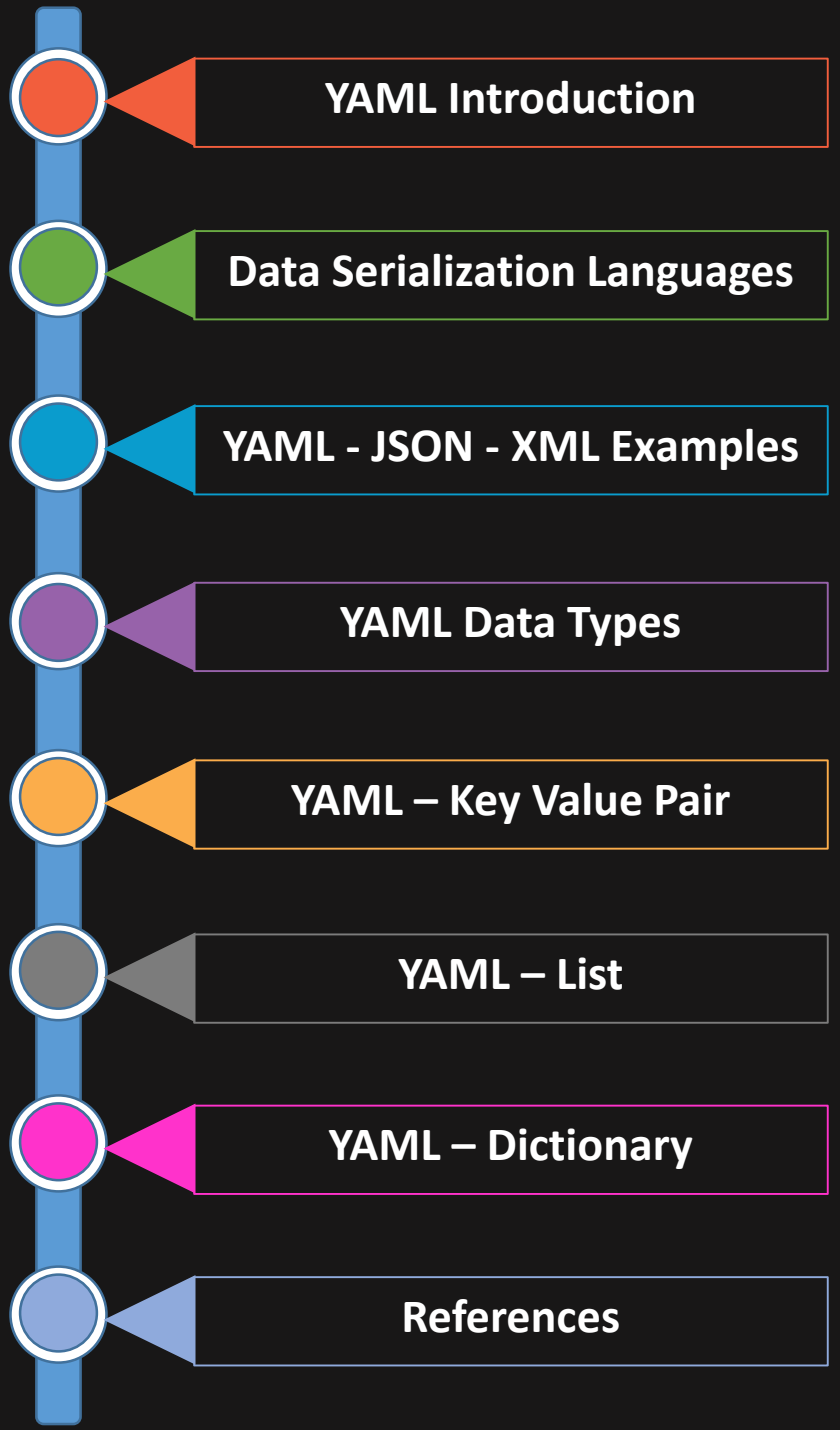

- Agenda -

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YAML Introduction

- **What is YAML**

  - Yet another markup language or YAML ain’t markup language
  - YAML is a data serialization language
  - It's often used as a format for configuration files, but its object serialization abilities make it a viable replacement for languages like JSON.

- **Creator of YAML**

  - The founding members of YAML are Ingy döt Net (author of the Perl module Data: Denter), Clark Evans, and Oren Ben-Kiki. YAML emerged from the union of two efforts.

- **Why and where we use YAML**

  - Define and configure build and release (CI/CD) pipelines using YAML.
  - Ansible, Docker, Kuberenetes, Puppet, Azure DevOps, AWS CloudFormation Configuration and etc.

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Data Serialization Languages

- **Why we use Data Serialization Language**

  - During REST API operation, if one side REST Client uses different program and the other end REST Server uses the other one, they can not communicate without a third interpreter. Here, Data Serialization Languages are used.

YAML	JSON	XML
Yet another markup language or YAML ain't markup language	JavaScript Object Notation	Extensible Markup Language
Data Interchange	Data Interchange	Markup Language
Easy to read	Easy to read	A bit complex
Map structure	Map structure	Tree structure
.yaml or .yml	.json	.xml

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YAML Vs JSON Vs XML

YAML Example	JSON Example	XML Example

Servers:
- name: Web Server
owner: Mahesh
status: Active
	{
	Servers: [
	{
	name: Web Server,
	owner: Mahesh,
	status: Active
	}
	]
	}
		<Servers>
		<Server>
		<name>Web Server</name>
		<owner>Mahesh</owner>
		<status>Active</status>
		<Servers>
		<Server>

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YAML Data Types

- **What data types are there in YAML**

  - YAML has three types of data types:

    1. Scalar
    - Scalar is a **Key Value Pair**
    - Scalar data type is classified into two data types: **Numeric** and **String**
    - Value of scalar can be integer, float, Boolean, and string.

    2. List
    - To represent a **list of items**

    3. Dictionary
    - To represent **collection of Key Value Pair**

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YAML - Scalar

- **Scalar in YAML**

  - Scalar is a **Key Value Pair**
  - Scalar data type is classified into two data types: **Numeric** and **String**
  - Value of scalar can be integer, float, Boolean, and string.

- **Numeric**

  - There are **three types of numeric data type**:

Integer Example	Floating point Example	Boolean Example
--- age: 12345 octalexample: 012345 hexaexample: 0x12d4	--- height: 180.0 exp: 12.3015e+05	--- boolenval1: True booleanval2: False fan: On light: Off

- **String**

  - YAML strings are Unicode.

String Example
--- age: 12345 octalexample: 012345 hexaexample: 0x12d4

YAML - List

- **Lists in YAML**
  - To represent a **list of items**
  - We can define the list as follows:

List – Single line Example

```
---
items: [6, 7, 8, 9, 10]
name: [six, seven, eight, nine, ten]
```

List - Block style Example

```
---
items:
  - 6
  - 7
  - 8
name:
  - "six"
  - "seven"
  - "eight"
  - "nine"
```

List - Flow style Example

```
---
items:
  - values:
      value1:
      value 2:
      value 3:
  - other values:
      key: value
```

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YAML – Dictionary

- **Dictionary in YAML**

  - To represent a **collection of Key Value pair**
  - If we want to write a complex YAML file which holds the complex data structure, we will use dictionaries.
  - We can define the dictionary as follows:

Dictionary Example

```
student2:
  fatherName: "William"
  motherName: "Marry"
  subjectDetails:
    subject1: 70
    subject2: 100
```

Dictionary with List Example

```
---
student1: "john"
hobbies:
  - music
  - reading
  - dancing
```

References

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