### DS - CSV

#### Simple serialized Storage data structure

- Stored data with header
- Each column separated by delimiter
- Data can fit in single system memory



Single System

Numbers

2

09

- Text
- Boolean & DT
- Null



Inputs

Collection of Programs

Outputs

Daasdt

# DS - XML

Text Based format

eXtensible Markup Language

- To Store and transport
- Hierarchical structure with custom tag

Raw Data Input **XML** Parser Algorithm Raw Data Output

**Environment** Single System

Text & Numbers

2 01

10

**Boolean & Dt** 

**Nested Structure** 

Null

Memory / Single File with Tag & Attributes

Stored in

Inputs

Collection of **Programs** 

**XSD & DDD** 

**Outputs** 



Daasdt

### DS - XML

- Exchange the data
- Tag ≈ Struct Type element

Attribute ≈ Element of Struct

Content : Main Value



- Lib (Python)
- → lxml
- xmltodict

## DS - JSON

#### JavaScript Object Notation

- Text Based format
- Data Interchange format
- Collection of Key value pair & Array

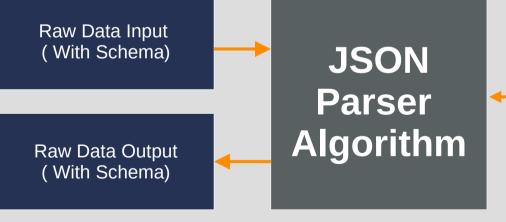
#### **Environment**

Single System

- 2
  - 01

12

- Text & Numbers
- Boolean & Dt
- Nested Structure
- Array & Object



Memory / Single File with KEYS (Schema)

Stored in

Data
Stored in
< KEY,
VALUE >
Pair

Inputs

Collection of Programs Outputs



### DS - JSON

- ✓ Interchange Data
- Web Development & API

- Data Storage & Exchange
- Activity (Logs, Event)



- LM:
- No Schema enforcement
- Performance
- Storage in efficiency

- USE :
- Small & Medium Data
- Interoperability
- Readability & API



# DS - JSON







### DS - YAML

#### YAML Ain't Markup Language

- · Text Based Serialization format
- Configuration format
- Allow structured data in plain format

#### **Environment**

Single System

- \_
- 2
  - 01

Indentati

on Based

**Multi line** 

support

#

Comments support

15

- Key Value pair
- List & Dictionary
- Simple Types
- Array & Object



Collection of

Daasdt

Inputs

Programs

Outputs

### DS - YAML

#### Declarative

5 & 6 generation languages

- Just declare the functionality
- Define configruations



- \* LM:
- Whitespace Sensitivity
- Scalability
- Type safity

# DS - YAML





