

# Lesson 12

## Python Essentials

### Overview

1. Working with JSON
2. Working with XMLA
3. Working with HTML

### Working with JSON

- JavaScript Object Notation.
- JSON is built on two structures:
  - Collections of key/value pairs.
  - lists of values.
- Python json module helps you encode and decode JSON/

**Key value:** “key”:“value”

```
"userName": "John Doe",
```

**Sub keys:** {“key”:{“subkey0”:“subvalue0”,“subkey1”:“subvalue1”, ...}}

```
"userName":  
{ "firstName": "John",  
  "lastName": "Doe",  
  "prefex": "MR"},
```

**List:** {“key”:[listvalue0, listvalue1, listvalue2, ...]}

```
{ "tags": ["bear", "polar", "animal", "mammal"]
```

Notes:

JSON Linters will format JSON so it easier to read by a human. The following website have JSON linters: - JSONLint - ConvertJson.com - JSON schema linter

## Retriving JSON data

- Key value:

```
"userName": "John Doe"
```

```
print(results['userName'])
```

- Sub keys:

```
"userName":  
{ "firstName": "John",  
  "lastName": "Doe",  
  "prefex": "MR"},
```

```
print(results['userName']['lastName'])
```

- List:

```
{"tags": ["bear", "polar", "animal", "mammal"]
```

```
print(results['description']['tags'][0])
```

Notes:

Output: - John Doe - Doe - bear