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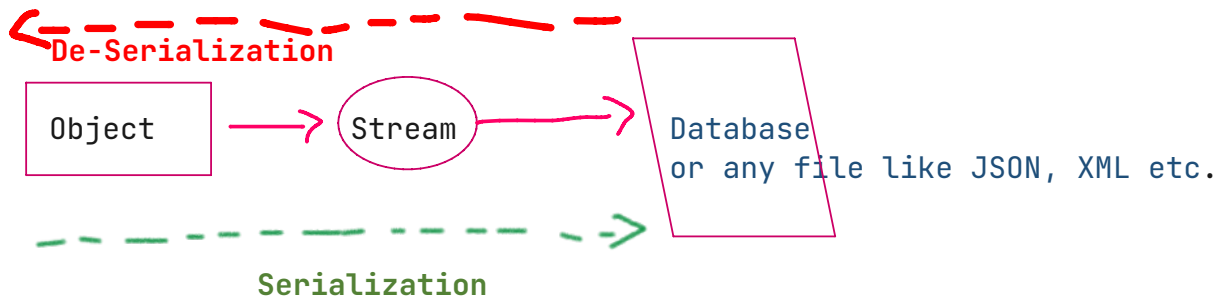
- It was first called Yet Another Markup Language but now it is **Yaml Ain't Markup Language**.
- Let's understand what is Markup Language first!

- Let's take an example of HTML, HTML helps to provide some structure, but for styling we use CSS.
- Then, What is the use of HTML? HTML is providing child parent relationship, first header will come, inside the header list will come, inside the list bullet points will come, inside the bullet points paragraph will come.
- The Relationship what goes inside and how they are layered this is the use of MARKUP Language.

- Let's see why we need serialization!
- Consider you are running one **application**, that takes the object from the database and share it into web-app and then it share the object to ML-APP.
- The Important thing here is, the datatype of the **object** need to **same** for **all** the **medium**, I mean the datatype of the object which is pulled from database, it's need to same in web-app as well as ML-APP.
- What if the data-type is changing in web-app and ML-APP, it causes error.
- So, We need a way to do this, that's why **serialization** and **De-serialization** comes into picture.
- Data Serialization, it's basically a process of converting the **data-objects** into a **complex data structure** into a **stream** of **byte**.
- Stream is just a **chunks of data**.
- Data object that is present in some complex data structure into a stream of storage, that is used to transfer the data on like physical devices.
- If you don't know about **object**, check appendix.

De-Serialization

- If you don't know about [object](#), check appendix.



- ★• Again, The process of converting this **data-objects** (which a combination of variable and data) into **series of bytes** that saves the state of this object in a form that is easily transmittable.
- This stream of data can be transferred over in YAML file, memory and database or any other file you want.
- The reverse of this is known de-serialization.
- In more simple words, if you want to represent object in a file that you can read and code and modify those files are known as data serialization.
- And the language used in those files are known as **data-serialization language**.
- Data Serialization languages are YAML, JSON, XML.

Why they changed the named to Yet Another Markup Language to **Yaml Ain't Markup Language**?

- Because HTML is used to store the documents, but YAML can store the objects in form of code.
- That's why they changed the name.

YAML is used in configuration files like DOCKER, K8'S, LOGS, CACHES.

Benefits of YAML:

- Simple and easy to read.
- It has a strict syntax (to avoid errors like strict indentation).
- YAML files can be easily convertible to JSON, XML.
- Most Programming languages uses it.
- It's more powerful when representing complex data.
- We can use various tools with YAML files like Parsers.
- Parsing(reading the data) is very easy.
- YAML is just to represent data in streams, that can be easily transfer to any type of file.

Creating a YAML file

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Creating a YAML:

- First create a file with the extension of `".yaml"` or `".yml"` both are fine.
- YAML is a `case sensitive` so be careful while writing the file.
- YAML only provides single line comment, it doesn't have multi line comment.
- To check the YAML files use this [YAML LINT](#) website.
- We already seen we can store only one kind of datatype in the documents. If you are storing multiple data-types, just create `multiple documents` in the same file using this syntax `(---)` this helps to `separate` the datatypes in single document.
- If you want to `finish` the document, use this syntax `(...)` it represent you finished the document.

Checkout the Github:

https://github.com/RAravindDS/YAML_COURSE

Tools to validate YAML

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There are some tools available to check the YAML very easily!

1. DATREE
2. MONOKLE (BY KUBESHOP)
3. LENS (AMAZING TOOL)

AMAZING BLOG:

- <https://itnext.io/how-to-validate-kubernetes-yaml-files-9a17b9a30f08>
- <https://learnxinyminutes.com/docs/yaml/>

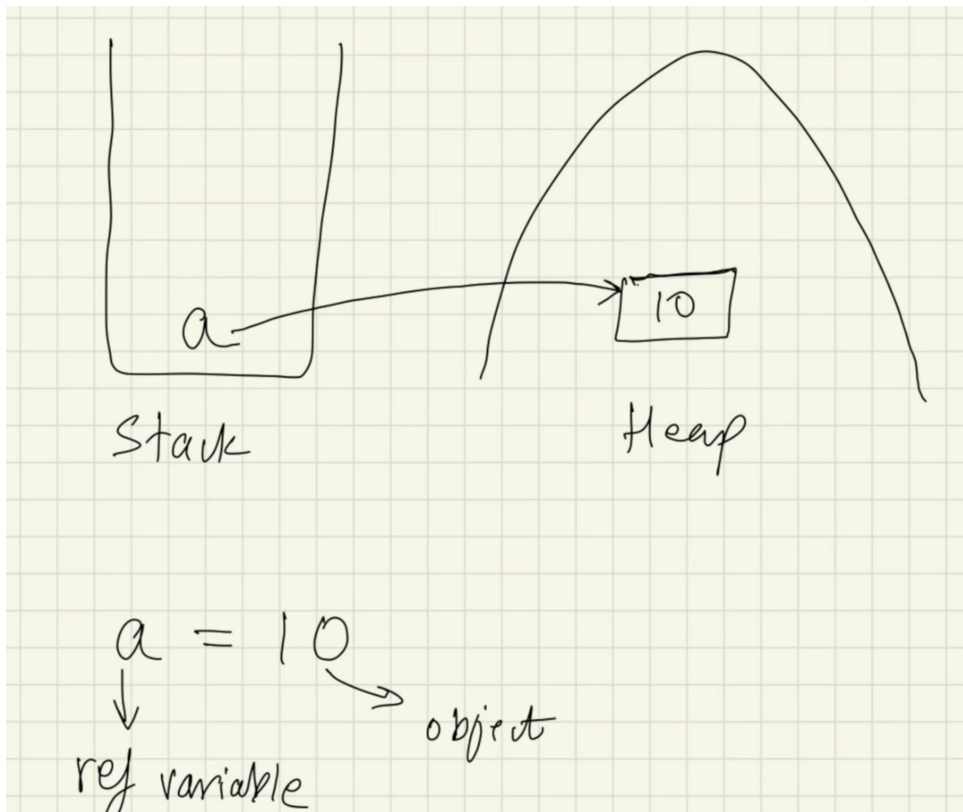
What is object?

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Object:

```
Variable = 10;
```

- Here the variable is called "**reference variable**" and the value is called "**object**"



XML

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What is XML?

- XML stands for extensible markup language.
- It can be used to store data or share data.
- It's used in various backend systems.
- XML is not readable by humans.

JSON

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What is JSON?

- JSON is stands for JavaScript object notation.
- Heavily used in java-script, mango-dB etc.