NodeJS - Stream

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We will cover with the following concepts

1) Readable Stream

2) Writable stream

What if I ask you to pass me an ocean of data?

1) Would you really collect all the data in one go and send it to me?

2) Or would you prefer to create a streaming channel between me and the data where you can pass the data in chunks whenever you get it.

3) That's what streams are in nodejs. A way of breaking down the data in small chunks because all of it won't fit in the memory in one go.

4) Let try and load a big file in the memory and see its impact on the system

5) Now let's do the same thing using streams

Nodejs streams are like Unix pipes

➔ They let you push or pull the data a little bit at a time, never keeping more in the memory than needed

➔ You can send the data, receive the data or both.

There are 4 types of streams

➔ **Readable** - Streams which are used for read operations

➔ **Writable** - Streams which are used for write operations

➔ Duplex - Streams which can be used for both read and write. A TCP socket is an example of duplex stream.

➔ Transform - Its a type of duplex stream where output is computed based on input.

Some things you must have realized

➔ Streams are faster way of dealing with IO bound data

➔ They are using event emitter class behind the scenes.

➔ Request and Response are streams. Request is a readable stream and response is a writable stream.

➔ Many of the built in modules of nodejs core use streaming interface.

➔ You may refer to this excellent [blog link](#) to explore it more.

The next steps are ...

Buffers