Environment

Browser   Node.js

JS Engine
Google = V8   ↳

Program written in c++
converts js code into a
code processor can understand
      follows ECMA standerd
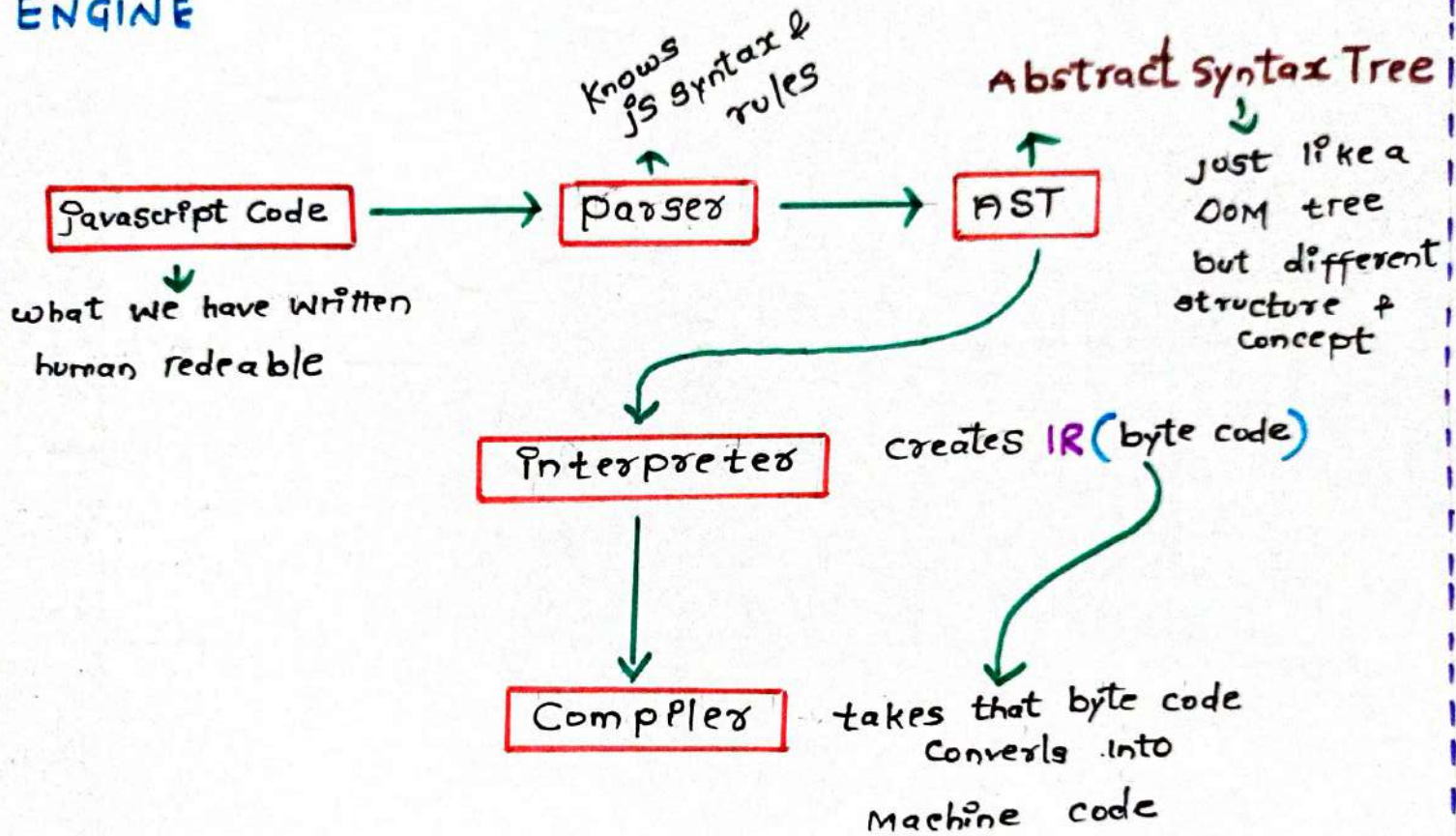
But How?

Engines

firefox = spiderMonkey
IE = chakra
safari = javascriptCore

ENGINE

```
Javascript Code  ────────▶  Parser  ────────▶  AST
```

Knows js syntax & rules *(pointing to Parser)*

Abstract Syntax Tree *(pointing to AST)*

what we have written human redeable *(below Javascript Code)*

just like a DOM tree but different structure & concept *(beside AST)*

```
        Interpreter
             │
             ▼
        Compiler
```

creates IR (byte code)

takes that byte code converts into Machine code *(beside Compiler)*

Interpreter | Compiler

Interpreter — Jhon

German
|
English

Compiler — Smith

German
|
English

Interpreter
translates your code and execcutes it line by line

Compiler
instantly translates all code into machine code before executing it

JIT Compiler:
Mixture of interpreter & Compiler translales the source to machine code while you are running the application