JAVASCRIPT ENGINE 🔥

How Javascript engine run our script file

Day 1

What is a javascript engine ?

> A JavaScript engine is a program or an interpreter which executes JavaScript code.

Every major browser has a different javascript engine

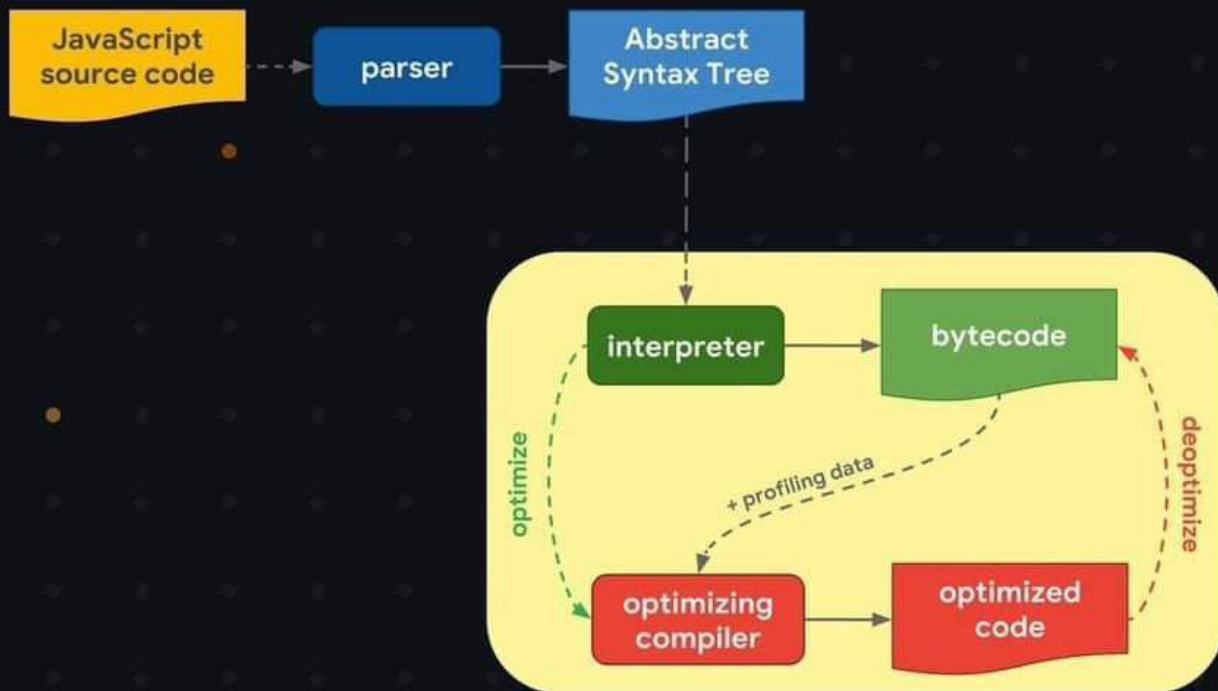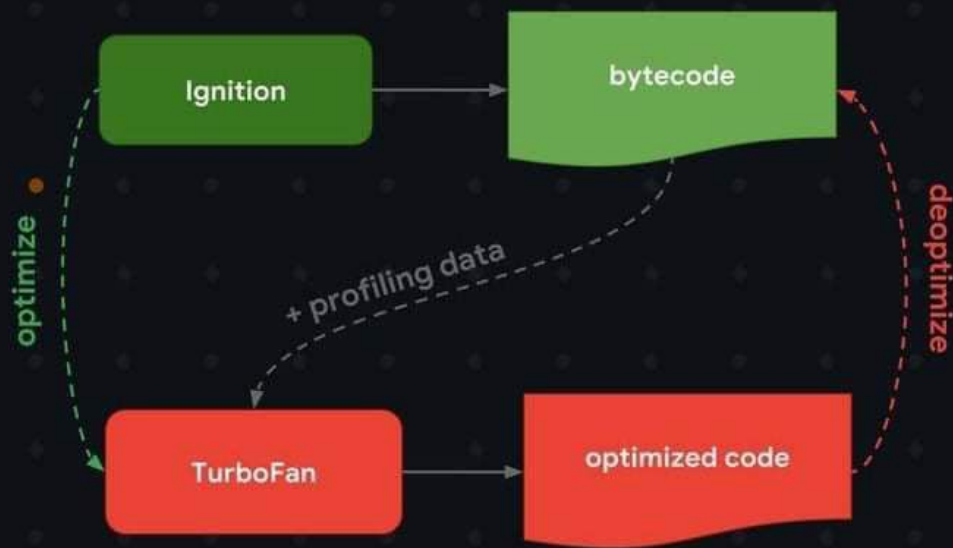| Browsers	Javascript Engine
Google	V8 Engine
Firefox	Spider Monkey
Edge	chakra Engine
Safari	Javascript Core

Javascript Engine Pipeline

This flowchart is a javascript engine pipeline but processes are different in all the browser.

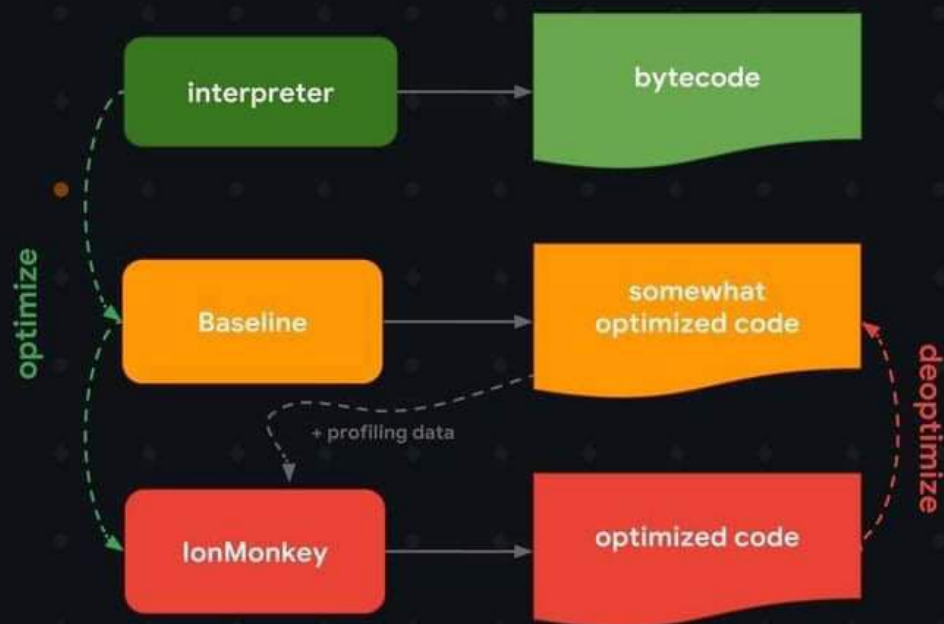Every javascript engine aim to convert byte code into machine code.

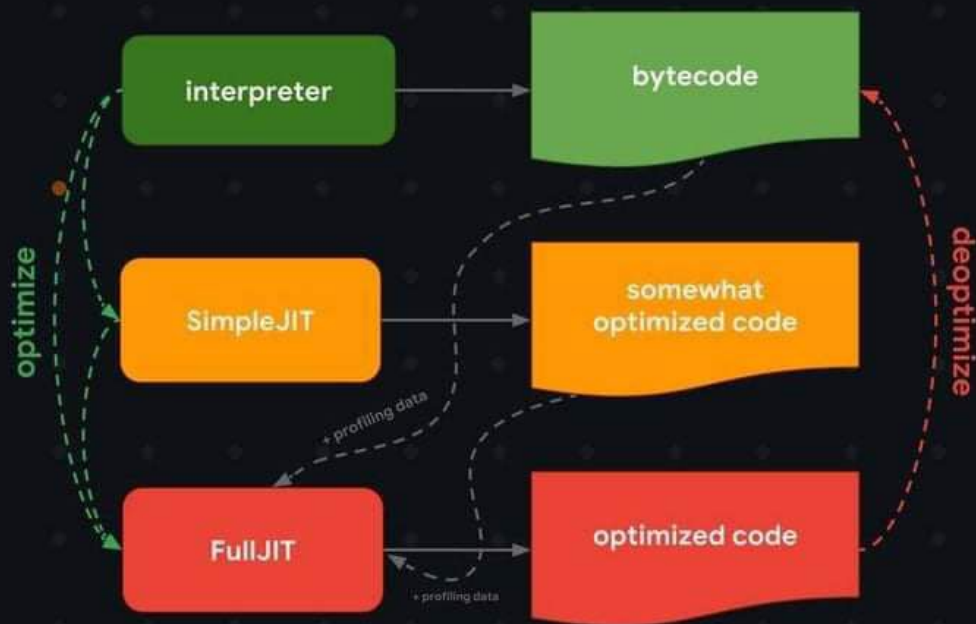In V8 Engine, We are using a single compiler is called as TurboFan.

In Spider Monkey, We are using a two compiler, tier one is a baseline and tier two is ionmonkey.

In Chakra, We are using a two compiler, tier one is a SimpleJIT and tier two is FullJIT.

In Javascript Core, We are using a three compiler, tier one is a baseline, tier two is Data Flow Graph and tier third is Faster Than Light.

	optimize →		deoptimize →
LLInt	→	**bytecode**	
Baseline	→	**somewhat optimized code**	
DFG	→	**mostly optimized code**	
FTL	→	**optimized code**	