

Global Execution Context

In JavaScript, whenever you run a program, the **JavaScript engine** (like V8 in Chrome, SpiderMonkey in Firefox, etc.) creates an **execution context**.

The first execution context that is created is called the **Global Execution Context**.

When is GEC Created?

- When you open a webpage or run JS code in the browser or Node.js.
- Created before any code runs.
- It stays alive until the program finishes.

The Global Execution Context has two phases:

(1) Creation Phase

- Happens before code execution.
- JavaScript scans the entire file first.
- It sets up **memory for variables and functions**.
- **Variables** are hoisted but initialized with undefined.
- **Functions** are hoisted with their complete body.

(2) Execution Phase

- Code actually runs line by line.
- Variables get assigned real values.
- Functions execute when called.

