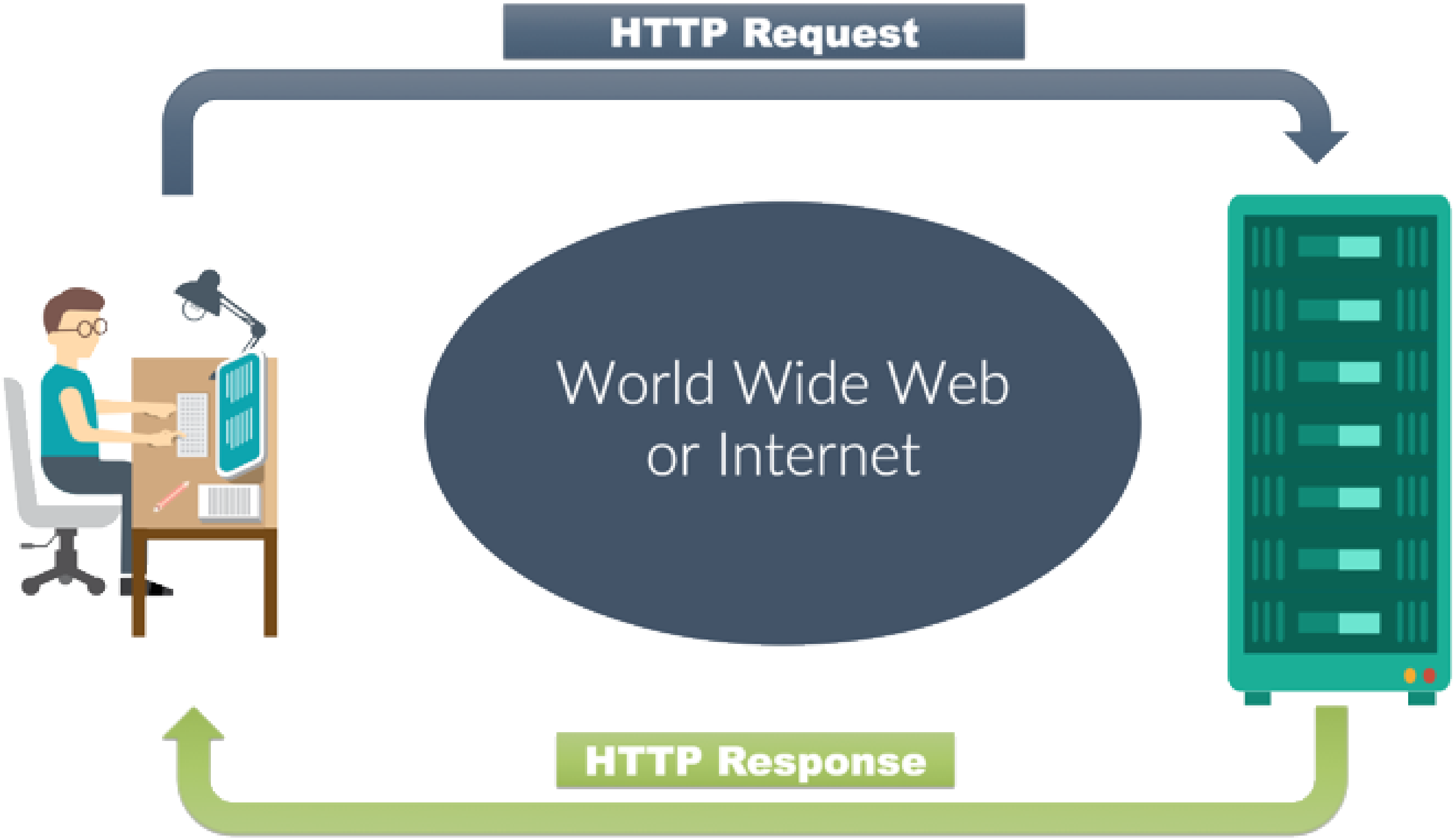
What is JavaScript

JavaScript is a high-level, interpreted programming language primarily used for client-side web development. It enables developers to add interactivity, dynamic behavior, and functionality to web pages. Here are some key points about JavaScript:


HTTP Request
World Wide Web
or Internet
HTTP Response

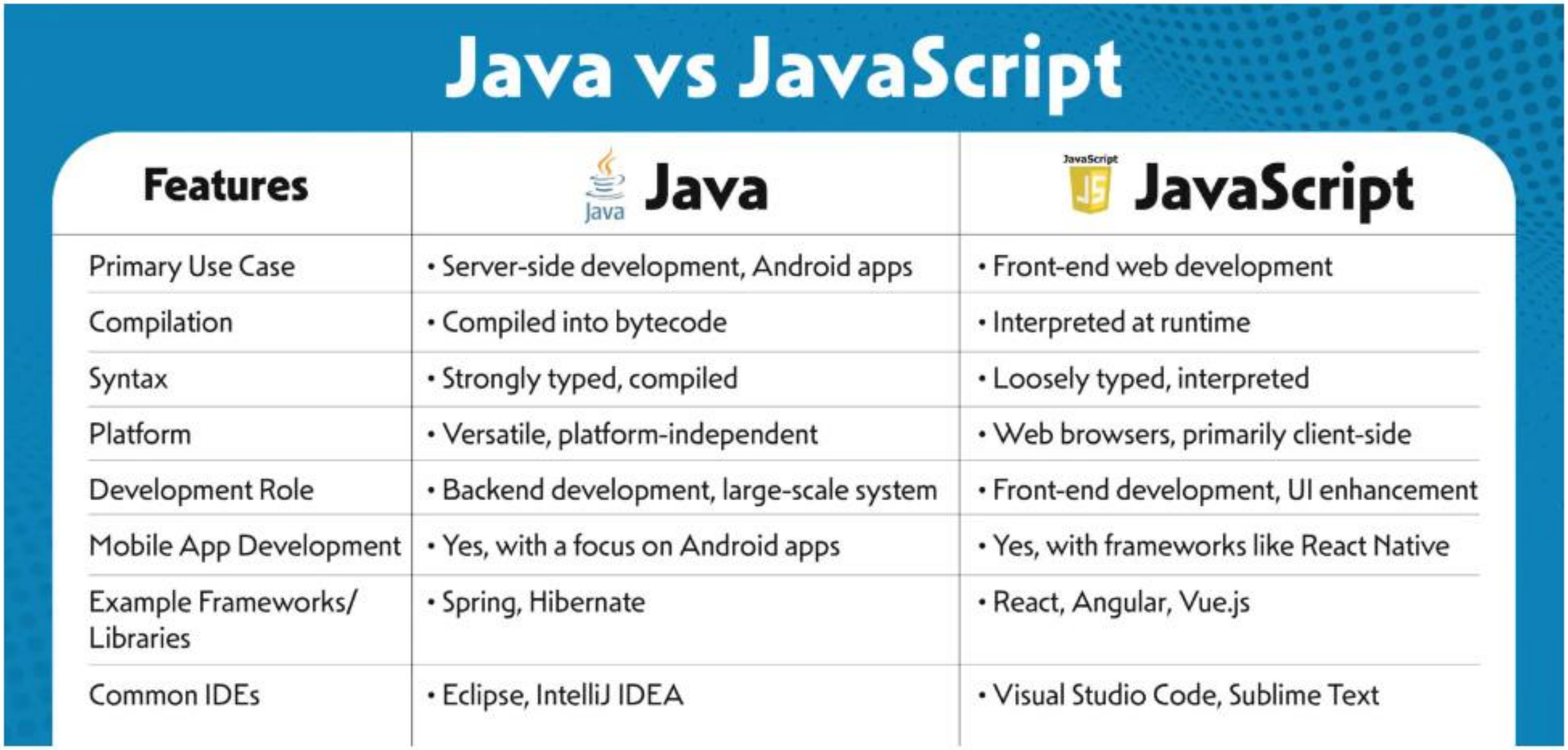
1. **Client-Side Scripting:** JavaScript is primarily used as a client-side scripting language, meaning it runs in the user's web browser rather than on a server. It allows developers to manipulate elements on a web page, respond to user actions, and dynamically update content without needing to reload the entire page.

2. **Dynamic and Interactive Web Pages:** JavaScript is essential for creating modern, dynamic web applications with features like form validation, animations, interactive maps, sliders, and more. It enhances user experience by providing responsive and interactive elements on web pages.

3. **Cross-Browser Compatibility:** JavaScript is supported by all major web browsers, including Chrome, Firefox, Safari, Edge, and others. This ensures that JavaScript-powered features work consistently across different browsers and platforms.

4. **Event-Driven Programming:** JavaScript is inherently event-driven, meaning it responds to events triggered by user actions (such as clicks, mouse movements, keyboard inputs) or by the browser (such as page load, window resize). Developers can write event handlers to execute specific actions in response to these events.

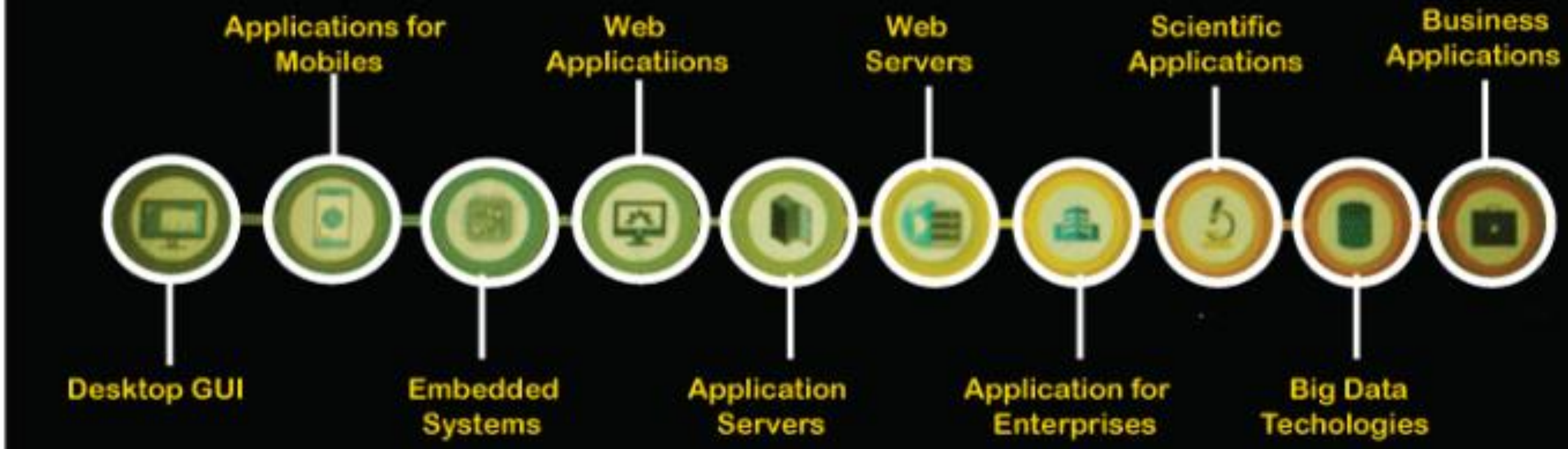
Overall, JavaScript is a fundamental technology for web development, playing a crucial role in creating dynamic, interactive, and user-friendly web experiences. Its versatility, ease of use, and wide adoption make it one of the most popular programming languages in the world.



Java vs JavaScript

Features	Java	JavaScript
Primary Use Case	• Server-side development, Android apps	• Front-end web development
Compilation	• Compiled into bytecode	• Interpreted at runtime
Syntax	• Strongly typed, compiled	• Loosely typed, interpreted
Platform	• Versatile, platform-independent	• Web browsers, primarily client-side
Development Role	• Backend development, large-scale system	• Front-end development, UI enhancement
Mobile App Development	• Yes, with a focus on Android apps	• Yes, with frameworks like React Native
Example Frameworks/ Libraries	• Spring, Hibernate	• React, Angular, Vue.js
Common IDEs	• Eclipse, IntelliJ IDEA	• Visual Studio Code, Sublime Text

Applications of Java



Desktop GUI

Applications for Mobiles

Embedded Systems

Web Applicatiions

Application Servers

Web Servers

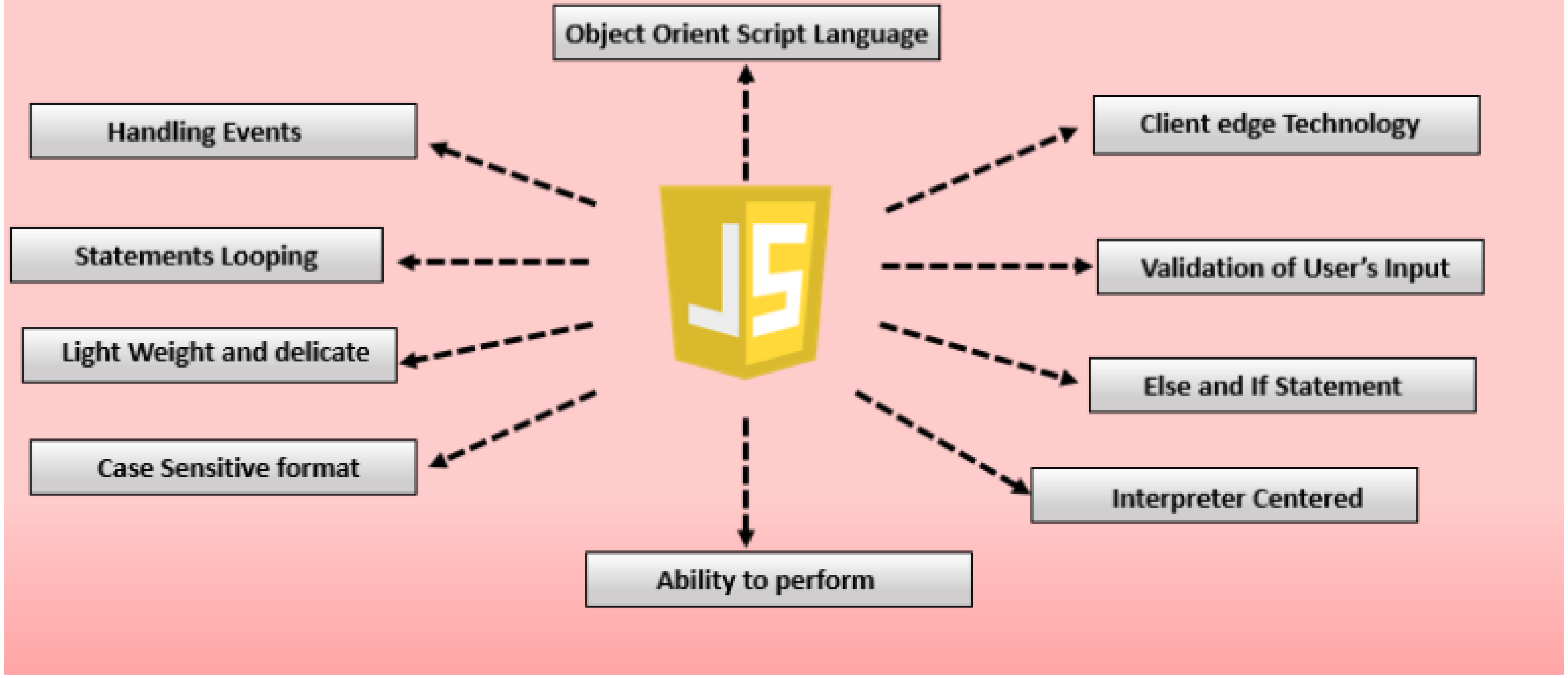
Application for Enterprises

Scientific Applications

Big Data Techologies

Business Applications

Features of JavaScript



Object Orient Script Language

Handling Events

Client edge Technology

Statements Looping

Validation of User's Input

Light Weight and delicate

Else and If Statement

Case Sensitive format

Interpreter Centered

Ability to perform

comparison between Java and JavaScript:

Feature	Java	JavaScript
Usage	General-purpose, standalone applications, Android apps	Web development, client-side scripting, server-side with Node.js
Platform	Requires Java Virtual Machine (JVM) to run	Runs directly in web browsers, Node.js for server-side
Syntax	C-style syntax, strongly influenced by C++	Also C-style syntax, but designed for web scripting
Execution	Compiled into bytecode, runs on JVM	Interpreted or JIT-compiled in web browsers
Popular Frameworks/Libraries	Spring, Hibernate, Android SDK	React, Angular, Vue.js, Node.js