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EMBARGOED UNTIL: Monday 2 November 2026, 10:00 AM GMT

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CheerpJ 5 launches as the first full OpenJDK distribution to bring Java 21 and Java 25 to the browser

CheerpJ now supports modern Java, ships the full JDK and commits to supporting each future long-term support (LTS) release within six months of launch. A new execution backend based on WasmGC is available in preview and is expected to bring major performance gains

LEEDS, UK, Monday 2 November 2026 – Leaning Technologies today released CheerpJ 5, bringing for the first time Java 21 and Java 25 to the browser. CheerpJ is a full distribution of the OpenJDK Java Development Kit (JDK) built on WebAssembly. It runs Java applications, libraries and applets in the browser, with no local Java installation or plugins. Because CheerpJ runs compiled Java bytecode, it doesn't need an application's source code, so it also works with third-party applications and libraries.

CheerpJ already supported Java 8, 11 and 17. With Java 21 and Java 25 added, developers can run applications built on recent Java in the browser on the version they were written for. Leaning Technologies has also committed to supporting each future long-term support release within six months, so that CheerpJ won't hold teams back from adopting new Java features.

"CheerpJ is now a full, modern OpenJDK distribution for the browser" said Stefano De Rossi, CEO and co-founder of Leaning Technologies. "Today, Java has joined Rust, C++ and Go as a language with a best-in-class browser target. Developers can build on the latest Java and deploy to native and browser from a single code base, and their users can run the result in a browser tab without installing a Java runtime."



CheerpJ 5 now ships the full JDK for every supported Java version, not just the runtime. This means Java can be compiled in the browser as well as run there, which makes browser-based IDEs, coding courses and interactive tutorials possible.

This release also adds an opt-in execution backend based on WasmGC, which will become the default in CheerpJ 6. CheerpJ currently compiles Java bytecode to JavaScript; the new backend runs in and generates WebAssembly code. Leaning Technologies expects it to bring significant performance gains and, together with other ongoing work, to make large, modern Java applications practical in the browser.

In development for more than eight years, CheerpJ is used by organisations globally including NASA, Ticketmaster and Moody's. With CheerpJ 5, it also becomes a tool for developers building on current Java.

WebAssembly has become a talking point again this autumn, as developers have used it to get games such as Grand Theft Auto (GTA) V running in a browser tab. Leaning Technologies' own demo, Browsercraft, uses CheerpJ to run the original Minecraft 1.2.5 client in the browser and receives tens of thousands of visitors every month.

WebAssembly's security has also come under scrutiny, after two critical vulnerabilities were disclosed in the Wasmtime runtime in October. CheerpJ runs inside the browser's own WebAssembly engine and sandbox, meaning the product and its users were unaffected.

Availability

CheerpJ 5 is available now. It is free for open-source projects, personal projects and one-person companies, with paid licences for businesses. Details are in the CheerpJ 5 announcement, and documentation is at cheerpj.com.

About Leaning Technologies

Leaning Technologies builds WebAssembly compute infrastructure and developer tools for running applications in the browser. Its products include CheerpJ, a Java Virtual Machine for the browser, and BrowserPod, a WebAssembly-based Linux virtual machine for running sandboxed, untrusted code in the browser.