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Java applets were small applications written in the Java programming language, or another programming language that compiles to Java bytecode, and delivered to users in the form of Java bytecode. The user launched the Java applet from a web page, and the applet was then executed within a Java virtual machine (JVM) in a process separate from the web browser itself. A Java applet could appear in a frame of the web page, a new application window, Sun's AppletViewer, or a stand-alone tool for testing applets.

Java applets were introduced in the first version of the Java language, which was released in 1995. Beginning in 2013, major web browsers began to phase out support for the underlying technology applets used to run, with applets becoming completely unable to be run by 2015–2017. Java applets were deprecated by Java 9 in 2017.[6][7][8][9][10]

Java applets were usually written in Java, but other languages such as Jython, JRuby, Pascal,[11] Scala, NetRexx, or Eiffel (via SmartEiffel) could be used as well.

Java applets run at very fast speeds and until 2011, they were many times faster than JavaScript.[citation needed] Unlike JavaScript, Java applets had access to 3D hardware acceleration, making them well-suited for non-trivial, computation-intensive visualizations. As browsers have gained support for hardware-accelerated graphics thanks to the canvas technology (or specifically WebGL in the case of 3D graphics),[12][13] as well as just-in-time compiled JavaScript,[14] the speed difference has become less noticeable.[citation needed]

Since Java bytecode is cross-platform (or platform independent), Java applets could be executed by clients for many platforms, including Microsoft Windows, FreeBSD, Unix, macOS and Linux. They could not be run on mobile devices, which do not support running standard Oracle JVM bytecode. Android devices can run code written in Java compiled for the Android Runtime.

The world has changed into a mobile-first era but even today, none of the applications could emerge as effective as the web-based apps. Surfacing on top of this is the prevalence of progressive web apps that perform functions identical to mobile apps. In this article, we will understand the difference between the two functionalities in web-based applications namely servlets and CGI.

Servlet is a Java class that is used to extend the capabilities of servers that host applications accessed by means of a request-response model. Servlets are mainly used to extend the applications hosted by web servers, however, they can respond to other types of requests too. For such applications, HTTP-specific servlet classes are defined by Java Servlet technology. All the programs of Servlets are written in JAVA and they get to run on JAVA Virtual Machine. The following image describes how a request from clients is served with the help of threads:

Common Gateway Interface(CGI): The Common Gateway Interface (CGI) provides the middleware between WWW servers and external databases and information sources. The World Wide Web Consortium (W3C) defined the Common Gateway Interface (CGI) and also defined how a program interacts with a HyperText Transfer Protocol (HTTP) server. The Web server typically passes the form information to a small application program that processes the data and may send back a confirmation message. This process or convention for passing data back and forth between the server and the application is called the common gateway interface (CGI). The following image describes how a web server acts as an intermediate between the CGI program and the client browser.