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## **THE JAVA PROGRAMMING LANGUAGE**

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## **МОВА ПРОГРАМУВАННЯ JAVA**

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Ключові слова: JVM (Java Віртуальна Машина), Java мова програмування;

Keywords: JVM (Java Virtual Machine), Java programming language;

Computers can work with different kinds of problems if they are given the right instructions for what to do. Instructions are first written in one of the high-level languages, e.g. FORTRAN, COBOL, ALGOL, PL/I, PASCAL, JAVA, BASIC, depending on the type of problem to be solved. A program if written in one of these languages is often called a source program and it cannot be directly processed by the computer until it has been compiled, which means interpreted into machine code.

Java remains the top programming language both in terms of current use in projects and developer choice. Java was developed by James Gosling, in 1990 at Sun Microsystems. Java was originally called *OAK*, and was designed for handheld devices and set-top boxes. *OAK* was unsuccessful so in 1995 Sun changed the name to Java and modified the language to take advantage of the burgeoning World Wide Web. Java further adds to the capabilities of C++ language. It is often said that Java owes a lot to C and C++ in terms of features and capabilities. The special thing about Java is that this is the first purely object oriented programming language. Java was developed on the principle of WORA i.e. "Write Once Run Anywhere". This feature adds to the portability of Java. You just need to compile Java Source code once and then on any machine where JVM (Java Virtual Machine is installed), you can run that code irrespective of the underlying operating system and hardware.

Java language is used to develop enterprise level application and video games; it can be employed to develop web based applications when used with JSP (Java Server Pages). Java has huge job market with attractive incentives. This is a must learn language for every programmer. Java's "run anywhere" quality applies to location and industry as well as platform. Java is fast, secure, and reliable. From laptops to datacenters, game consoles to scientific supercomputers, cell phones to the Internet, Java is everywhere!

According to Dice's July, 2014 data, Java (including Java Platform Enterprise Edition, Oracle's extended version) and various flavors of C (including C++ and C#) are out in front by a large margin, with 17,393 and 16,172 job postings asking for those skills this month.

Java is a general purpose programming language with a number of features that make the language well suited for use on the World Wide Web. Small Java applications are called Java applets and can be downloaded from a Web server and run on your computer by a Java-compatible Web browser, such as Netscape Navigator or Microsoft Internet Explorer.