LEARNING ACTIVITY SHEET

SPECIAL PROGRAM IN ICT
9 BASIC PROGRAMMING
Second Quarter, Week 1

Name of Learner:_____ Date:_____

Grade Level/Section:_____

Introduction to JAVA

BACKGROUND INFORMATION FOR LEARNERS

JAVA was developed by **Sun Microsystems** Inc in the year **1991**, later acquired by Oracle Corporation. It was developed by James Gosling and Patrick Naughton. It is a simple programming language. Java makes writing, compiling, and debugging programming easy. It helps to create reusable code and modular programs.

Java is a class-based, object-oriented programming language and is designed to have as few implementation dependencies as possible. A general-purpose programming language made for developers to *write once run anywhere* that is compiled Java code can run on all platforms that support Java. Java applications are compiled to byte code that can run on any Java Virtual Machine. The syntax of Java is similar to c/c++.

History of JAVA

Java's history is very interesting. It is a programming language created in 1991. James Gosling, Mike Sheridan, and Patrick Naughton, a team of Sun engineers known as the **Green team** initiated the Java language in 1991. **Sun Microsystems** released its first public implementation in 1996 as **Java 1.0**. It provides no-cost -run-times on popular platforms. Java1.0 compiler was re-written in Java by Arthur Van Hoff to strictly comply with its specifications. With the arrival of Java 2, new versions had multiple configurations built for different types of platforms.

In 1997, Sun Microsystems approached the ISO standards body and later formalized Java, but it soon withdrew from the process. At one time, Sun made most of its Java implementations available without charge, despite their proprietary software status. Sun generated revenue from Java through the selling of licenses for specialized products such as the Java Enterprise System.

On November 13, 2006, Sun released much of its Java virtual machine as free, open-source software. On May 8, 2007, Sun finished the process, making all of its JVM's core code available under open-source distribution terms.
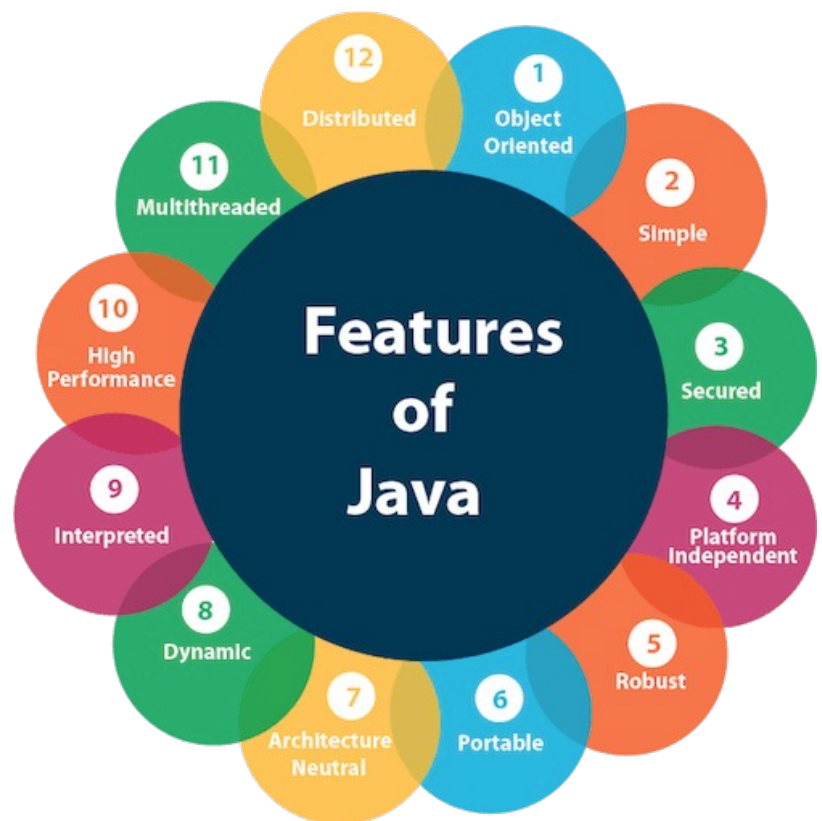
The principles for creating java were simple, robust, secured, high performance, portable, multi-threaded, interpreted, dynamic, etc. **James Gosling** in 1995 developed Java, who is known as the Father of Java. Currently, Java is used in mobile devices, internet programming, games, e-business, etc.

Features of JAVA

The primary objective of Java programming language creation was to make it portable, simple and secure programming language. Apart from this, there are also some excellent features which play an important role in the popularity of this language. The features of Java are also known as java *buzzwords*.

A list of most important features of Java language is given below.

1. Object - Oriented
2. Simple
3. Secured
4. Platform independent
5. Robust
6. Portable
7. Architecture neutral
8. Dynamic
9. Interpreted
10. High Performance
11. Multithreaded
12. Distributed

Difference between a Java Application and a Java Applet

Java Application:

Java Application is just like a Java program that runs on an underlying operating system with the support of a virtual machine. It is also known as an **application program**. The graphical user interface is not necessary to execute the java applications, it can be run with or without it.

Java Applet:

An applet is a Java program that can be embedded into a web page. It runs inside the web browser and works at client side. An applet is embedded in an HTML page using the **APPLET** or **OBJECT** tag and hosted on a web server. Applets are used to make the web site more dynamic and entertaining.

Difference between Application and Applet:

Java Application	Java Applet
Applications are just like a Java programs that can be execute independently without using the web browser.	Applets are small Java programs that are designed to be included with the HTML web document. They require a Java-enabled web browser for execution.
Application program requires a main function for its execution.	Applet does not require a main function for its execution.
Java application programs have the full access to the local file system and network.	Applets don't have local disk and network access.
Applications can access all kinds of resources available on the system.	Applets can only access the browser specific services. They don't have access to the local system.
Applications can execute the programs from the local system.	Applets cannot execute programs from the local machine.
An application program is needed to perform some task directly for the user.	An applet program is needed to perform small tasks or the part of it.

LEARNING COMPETENCY

Familiarize the JAVA and its functions in programming.

ACTIVITIES

ACTIVITY 1: TRUE or FALSE

Directions: Write TRUE if the statement is correct and write FALSE if it is incorrect.

_____1. JAVA was developed by Sun Microsystems Inc in the year 1992.

_____2. Java Application is just like a Java program that runs on an underlying operating system with the support of a virtual machine.

_____3. JAVA has 13 most important features.

_____4. On November 13, 2006, Sun released much of its Java virtual machine as paid, open-source software.

_____5. JAVA was developed by James Gosling and Patrick Naughton.

_____6. On June 8, 2007, Sun finished the process, making all of its JVM's core code available under open-source distribution terms.

_____7. Currently, Java is used in mobile devices, internet programming, games, e-business, etc.

_____8. An applet is a Java program that can be embedded into a web page.

ACTIVITY 2

Write the12 most important features of JAVA.

1. _____   7. _____

2. _____   8. _____

3. _____   9. _____

4. _____   10. _____

5. _____   11. _____

6. _____   12. _____

REFLECTION

In your own words, explain what JAVA is and why it is important in computer programming.

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REFERENCES

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https://www.tutorialspoint.com/java/index.htm

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