

## Introduction to JAVA programming

**WebQuest Description:** This web quest will introduce the JAVA programming language, how it developed, its unique features, a how to start developing JAVA applications.

**Grade Level:** College / Adult

**Curriculum:** Technology

**Keywords:** JAVA, Programming

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### Introduction

Word processors are used to write documents, Email programs to send and receive emails, web browsers to browse the internet. All of these are software applications developed using programming languages. Java is a powerful programming language used to develop applications for servers, desktops, and handheld devices. A team led by James Gosling (pictured above) at Sun Microsystems developed Java. It was originally called Oak, designed in 1991 for use in embedded chips. In 1995, by the name of Java it was redesigned for developing internet applications. This webquest will help learn more about JAVA, and how to develop your first application using the JAVA programming language.

### Tasks

As you perform this Web Quest, you will achieve the following: Get an overview of JAVA history and characteristics. Gain a basic knowledge of how to use the Net Beans IDE (Integrated Development Environment) to develop a JAVA application.

### Process

Note: Please divide your time wisely, you only have 90 minutes to finish this web quest. What is a computer? What is the strategy of developing applications? Why JAVA? You may have many questions regarding this topic, therefore to begin with read the following topics: Hardware and Software What is Software Development Life Cycle (SDLC)? Characteristics of Java Note: A link to each topic is available in the resources below. Note: For the first topic, only read the first page. Watch the following video: What is Java and the Java VM? Note: A link to the video is available in the resources below. Task 1: Decide on a two characteristics you like about JAVA. Write in your own words a justification of your selection, provide examples if applicable. (Minimum 100 words). Answer the following question: What is the role of the JAVA Virtual Machine (JAVA VM)? Example of different programming levels: Machine Code, Assembler, 000100C, LDA VALUE, 006300D, ADA TOTAL, 007200D, STATOTAL, 100, DW1TOTAL, 110, DW1VALUE High Level languages COBOL, Pascal, FORTRAN, C, C++, Java, total += value; Note: A list of Layered Architecture is included in the resources below. Watch the "PHP vs. Python vs. Ruby vs. Java vs. .NET" video below to get an overview of the differences between the different programming languages. There are many programs that support the development of Java software, including but not limited to: Sun Java Development Kit (JDK) IBM Eclipse Borland JBuilder BlueJ jGRASP jCreator NetBeans; NetBeans is going to be used to complete the following task. Watch the NetBeans Overview video in the resources below to learn more about its unique features. Task 2: Install the NetBeans IDE (Optional). Run the application. Notes: NetBeans is already installed in Bahrain Polytechnic's lab computers. The latest version of NetBeans can be found in the links section below. Task 3: Build your first application using the JAVA language. Follow the tutorial "Hello World!" for the NetBeans IDE. A link to the tutorial can be found in the links section below. Note: You are not required to compile the application. Task 4: Create a

new&nbsp;application to display the following 2 lines.JAVA is simple.JAVA is portable.

## Evaluation

The rubric to evaluate this web quest is attached below.

Category and Score	Not answers (0 point)	Beginning (1 point)	Developing (3 points)	Accomplished (5 points)	Score
Task 1	Task not answered	Less than 100 words Nonsense	Less than 100 words Logical realistic justification	100+ words Logical realistic justification	/5
Task 2	NetBeans not installed	NetBeans fails to start	NA	Successfully opened NetBeans	/5
Task 3	The application does not run	The application runs without any output	The application runs without the expected results	The application runs with the expected results	/5
Task 4	The application does not run	The application runs without any output	The application runs without the expected results	The application runs with the expected results	/5
				Total Score	/20

## Conclusion

As you have found, it is easy and fun to program using JAVA.&nbsp; JAVA is simple, yet very big. You can use many of the available classes just as they are without any changes. And above all its open source, secure and free. This web quest&nbsp;didn't&nbsp;cover anything but the very basics of JAVA and how it works, if desired to learn JAVA I would recommend the following book.Introduction to&nbsp;Java Programming, Brief Version, 9/EY. Daniel Liang,&nbsp;Armstrong Atlantic State UniversityISBN-10:&nbsp;0132923734ISBN-13: &nbsp;9780132923736Publisher:&nbsp;Prentice HallPublished: &nbsp;03/01/2012

## Teacher Page

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**Standards**

**Credits**

**Other**