PROMINEO TECH

Career Services Assignment 3 – Java Flash Cards

Instructions: Research common Java interview questions online and create 20 flash cards from the information you find. Study your flash cards regularly to better prepare for interviews. Fill out the table below with the information you put on each of your flash cards.

Front of Card	Back of Card
What is Java?	Java is a high-level, class-based, object-oriented programming language originally developed by Sun Microsystems and released in 1995.
What is the difference between JDK, JRE, and JVM?	JDK stands for Java Development Kit, which is a software development environment used for developing Java applications. JRE stands for Java Runtime Environment, which is a software package required to run Java-based applications. JVM stands for Java Virtual Machine, which is an abstract machine that provides a runtime environment in which Java bytecode can be executed.
What is an object in Java?	An object is an instance of a class, which encapsulates data and behavior into a single entity.
What is inheritance in Java?	Inheritance is a mechanism in which a new class is derived from an existing class, inheriting its attributes and methods.
What is polymorphism in Java?	Polymorphism is the ability of an object to take on many forms, allowing objects of different classes to be treated as if they were objects of the same class.
What is encapsulation in Java?	Encapsulation is the process of hiding implementation details from the users, allowing them to access the functionality through a well-defined interface.
What is an interface in Java?	An interface is a collection of abstract methods and constants that can be used to define a contract for a class to implement.
What is a package in Java?	A package is a namespace that organizes classes and interfaces in a hierarchical structure.

Career Services Assignment 3 – Java Flash Cards

What is a constructor in Java?	A constructor is a special method that is used to initialize objects of a class.
What is a static variable in Java?	A static variable is a class-level variable that is shared by all instances of the class.
What is a final variable in Java?	A final variable is a variable that cannot be changed once it has been assigned a value.
What is exception handling in Java?	Exception handling is a mechanism that deals with errors and abnormal situations that arise during program execution.
What is a try-catch block in Java?	A try-catch block is a mechanism for handling exceptions in Java. Code that may throw an exception is placed in a 'try' block, and code that handles the exception is placed in a 'catch' block.
What is a thread in Java?	A thread is a lightweight process that executes in parallel with other threads within the same program.
What is synchronization in Java?	Synchronization is the process of controlling access to shared resources in a multi-threaded environment.
What is a collection in Java?	A collection is an object that groups multiple elements into a single unit.
What is the difference between List and Set in Java?	List is an ordered collection that allows duplicates, while Set is an unordered collection that does not allow duplicates.
What is the difference between HashMap and TreeMap in Java?	HashMap is an unordered collection that uses hashing to store key-value pairs, while TreeMap is a sorted map that uses a Red-Black tree to store key-value pairs.
What is the difference between a checked and an unchecked exception in Java?	A checked exception is an exception that must be handled by the calling method or declared in the method signature, while an unchecked exception is an exception that does not have this requirement.
What is the difference between equals() and == in Java?	'==' is an operator that compares two objects for reference equality, while equals() is a method that compares two objects for value equality.