

Career Services Assignment 3 – Java Flash Cards

Points possible: 50

Category	Criteria	% of Grade
Completeness	All requirements of the assignment are complete.	100

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?	High level programming language, platform independent. Collection of object. Developed by Sun Microsystems. Many applications, websites, games were developed using Java.
What are the features of JAVA?	OOP concepts: Object-oriented; Inheritance; Encapsulation; Polymorphism; Abstraction. Platform independent: program works on different platforms without modification. High performance: JIT (just in time) enables high performance by converting bytecode into machine language then JVM starts execution. Multi threaded: flow of execution (thread), JVM creates main thread, user can create multiple threads by extending thread class or implementing Runnable interface.
How does Java enable high performance?	Using Just In Time compiler to enable high performance. Used to convert instructions into bytecodes.
Name the Java IDEs	Eclipse, NetBeans
What do you mean by Constructor?	<ul style="list-style-type: none"> • When new object is created in a program, constructor gets invoked corresponding to the class. • Constructor is method that has same name as class. • Default constructor is created if user doesn't create one implicitly. • Constructor can be overloaded. • User can create constructor with a parameter and should also create

	another constructor explicitly without a parameter.
What is meant by the Local variable and the Instance variable?	Local variables are defined in the method and scope of the variables that exist inside the method itself. Instance variables are designed inside the class and outside the method and the scope of the variable exists throughout the class.
What is a Class?	All java codes are defined in a Class, having variables and methods. Variables are attributes which define the state of a class. Methods are the place where business logic is done. Contains set of statements to satisfy the requirement.
What is an Object?	An instance of a class is called an object. The object has state and behavior.
What are OOPs concepts?	OOPs concepts include: <ul style="list-style-type: none"> • Inheritance • Encapsulation • Polymorphism • Abstraction • Interface
What is Inheritance?	One class extends to another class. Codes can be reused from one class to another class. The existing class is known as Super Class, derived class is known as sub class.
What is Encapsulation?	Purpose of encapsulation: <ul style="list-style-type: none"> • Protect code from others • Code maintainability
What is Polymorphism?	Polymorphism means many forms. A single object can refer to the super-class or sub-class depending on the reference type which is called polymorphism. Applicable for overriding, not for overloading.
What is meant by Method Overriding?	Method overriding happens if the sub-class method satisfies the conditions below with the Super-class method: <ul style="list-style-type: none"> • Method name should be the same • Argument should be the same • Return type should be the same Key benefit of overriding is the sub-class can provide specific information about that sub-class type

What is meant by Overloading?	<p>Method overloading happens for different classes or within the same class. Sub-class method should satisfy these conditions with the Super-class method or methods in the same class:</p> <ul style="list-style-type: none"> • Same method name • Different argument types • May be different return types
What is meant by Interface?	<p>Multiple inheritances cannot be achieved in java. To overcome this, the Interface concept was introduced.</p> <p>An interface is a template which has only method declarations and not the method implementation.</p>
What is meant by Abstract class?	<p>Can create Abstract class by using the “Abstract” keyword before the class name. An abstract class can have both “Abstract” and “Non-abstract” methods that are a concrete class.</p>
What is the difference between Array and ArrayList?	<p>Array:</p> <ul style="list-style-type: none"> • Size given at time of declaration • Index required to add to objects in array • Type is not parameterized <p>ArrayList:</p> <ul style="list-style-type: none"> • Size not required, changes dynamically • No index required • Parameterized
What is the difference between String, String Builder and String Buffer?	<p>String variables are stored in “constant string pool”. Once string reference changes the old value that exists in the constant string pool, it cannot be erased.</p> <p>String Buffer – string values are stored in a stack. If value is changed then new value replaces the old value. Synchronized which is thread-safe. Performance is slower than String Builder.</p> <p>String Builder – Same as String Buffer except a String Builder that is not threaded safely is not synchronized. Performance is fast.</p>
Explain about Public and Private access specifiers.	<p>Methods and instance variables are known as members. Public members are visible in the same package as well as the outside package that is for other packages. Private members are visible in the same class only and not for</p>

	the other classes in the same package as well as classes in outside packages.
What are the advantages of Exception handling?	The normal flow of the execution won't be terminated if an exception gets handled. The problem can be identified by using catch declaration.