**Java I Final Test Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| 1. There are two methods in the same class that have the same names, but different parameter lists. What is the term that describes that behavior? Method overloading |
| 1. The Car class inherits from the Vehicle class. The Vehicle class has a method called “drive()". You need to rewrite that method in the Car class so it has a slightly different behavior. What do you called the process of rewriting an inherited method? Method overriding |
| 1. Describe any characteristic of an abstract method. The method has no body, only the definition |
| 1. Describe any characteristic of an abstract class. It has at least one abstract method |
| 1. How many classes can you directly inherit into a Java class? 1 |
| 1. Can you have non-abstract methods in an abstract class? Yes |
| 1. Write the signature for a public class named X that inherits from the A class and the B and C interfaces. public class X extends A implements B, C { |
| 1. The methods of an interface have two automatic characteristics. List them. Public and abstract |
| 1. The variables of an interface have two automatic characteristics. List them. Static and final |
| 1. What does a sub class NOT inherit from the super class? Private variables and methods |
| 1. Write the code for an ArrayList that is configured to hold only String objects. ArrayList<String> stringArrayList = new ArrayList<String>(); |
| 1. Write the code for a HashMap that is configured to hold String object keys and File object values. Map<String, File> stringFileHashMap = new HashMap<>(); |
| 1. Name any collection class that is a dictionary. Hashmap |
| 1. Name any collection class that is a sequence. ArrayList |
| 1. Code an ArrayList object that instantiates with a capacity of 50. ArrayList<String> stringArrayList = new ArrayList<String>(50); |
| 1. You have the following class:  **p****ublic class Key{  private String id;  private int codeBase;    public Key(String id, int codeBase){  this.id = id;  this.codeBase = codeBase;  }   //other code -- there are no getters or setters for the instance variables. }** The class ExpandedKey inherits from the Key class and has a new String instance variable called ownerName. Use constructor chaining to code a constructor for the ExpandedKey class that takes three parameters (two Strings and an int) and loads the three instance variables of the ExpandedKey class. Do not modify the Key class.   public ExpandedKey(String id, int codeBase, String ownerName) {  super(id, codeBase);  this.ownerName = ownerName;  } |
| 1. The abstract class Person is inherited into the Employee, Customer, and Contractor classes. Code a three element array that contains an Employee object, a Customer object, and a Contractor object.   Person people[] = new Person[3];  people[0] = new Employee();  people[1] = new Customer();  people[2] = new Contractor(); |
| 1. Code a three element array that contains objects of the String, Double, and ArrayList classes.   Object objects[] = new Object[3]  objects[0] = new String(“Test”);  objects[1] = new Double(32.3);  objects[2] = new ArrayList<Object>() |
| 1. What keyword distinguishes a class method or variable from an instance variable or method? |
| 1. What keyword distinguishes a constant from a non-constant variable? static |
| 1. In the method below, you have a variable named dbase that it is calling a method named connection(). **public void getDatabase(Database dbase){  dbase = new Database();  dbase.connection();  dbase.operations();  dbase.close(); }**  The connection() method can throw a DBConnectionException. Write a try-catch structure for the DConnectionException. In the catch block, print the message from the DConnectionException object. |
| 1. You realize that your DataBase object's close() method should be called no matter what. Modify your above code to include the close() method in a finally block. |
| 1. You have written a class that includes a method that contains three catch blocks. The class will not compile and you are getting a message saying that you will never reach the code that is in the last catch block. What is the problem? |
| 1. The method below can throw a DBConnectionException. However, you have decided that you do not wish to handle the exception within the method. Instead, if an exception occurs in the method you want to have the method throw the exception object, which will be handled at a higher level than within the method itself. Modify the method so it does that. **public void getDatabase(Database dbase){  dbase = new Database();  dbase.connection();  dbase.operations();  dbase.close();** } |
| 1. If you create an object of the File class, will it only refer to files? |