Selbsteinschätzung 808

Sonntag, 9. Februar 2025 15:24

Topic					
Java Basics					
	x				
Define the scope of variables		x			
Define the structure of a Java class		x			
Create executable Java applications with a main method; run a Java program from the command line; produce console output		x	x		
Import other Java package to make them accessible in your code		x			
Compare and contrast the features and components of Java such as: platform independence, object orientation, encapsulation,…		x			
Working With Java Data Types					
Declare and Initialize variables (casting of primitive data types)	x				
static variables	x				
difference between object reference variables and primitive variables	x				
Know how to read or write to object fields (getter & setter)	x				
Explain an Object's Lifecycle		x			
Develop code that uses wrapper classes such as Boolean, Double and Integer		x			
Using Operators and Decision Constructs					
Use Java operators; use parentheses to override operator precedence		x			
Test equality between Strings and other objects using == and equals()	x				
Create if and if/else and ternary constructy	x				
Use a switch statement		x			
Creating and Using Arrays					
Declare, instantiate, initialise and use 1-D array	x				
Declare, instantiate, initialise and use 2-D array	x				
Using Loop Constructs					
Create and use while loops	x				
Create and use for and enhanced for loops	x				
Create and use do/while loops	x				
compare loop constructs	x				
use break and continue	x				
Working with Methods and Encapsulation					
Create Methods with arguments and return values, including overloaded methods	x				
Apply static keyword to methods and fields	x				
Create and overload constructors; differentate between default and user defined constructors	x				
apply access modifier		x			
Apply encapsulation principles to a class		x			
Determine the effect upon object references and primitive values when they are passed into methods that change the value		x			
Working with Inheritance					
Describe inheritance and its benefits		x			
Develop code that makes use of polymorphism; develop code that overrides methods;			x		

differentiate between the type of reference and the type of an object					
Determine when casting is necessary			x		
Use super and this to access objects and constructors		x			
Use abstract classes and interfaces		x			
		x			
Handling Exceptions					
Differentiate among checked, unchecked Exceptions and Errors		x			
Create a try-catch block and determin how exceptions alter normal program flow		x			
Describe a try-catch block and determine how eceptions alter normal program flow		x			
Describe the advantages of Exception handling		x			
Create and invoke a method that throws an exception		x			
Recognize common exception classes (NullPointer,Arithmetic, ArrayIndexOutOfBounds,ClassCast)		(x)	x		
Working with selected classes from the Java API					
Manipulate data using the StringBuilder class and ist methods				x	
create and manipulate Strings		x			
Create and manipulate calendar data using classes from LocalDateTime, LocalDate, LocalTime, DateTimeFormatter, Period					x
Declare and use an ArrayList of a given type		x			
Write a simple Lambda expression that consumes a Lambda Predicate expression					x