Java oca exam

-1>If a method is overridden but we use a polymorphic(super type) reference to refer to the subtype object with the overriding method the compiler assumes we are calling the supertype version of the method. If the supertype version declares a checked exception but the overriding subtype method does not, the compiler thinks you are calling method that declares an exception. (pt 2 q43)

0> Default methods were introduced to provide backward compatibility for old interfaces so that they can have new methods without effecting existing code.

0> Always see the unreachable code and if it occur then uncaught exception or compile time error

1>Bootclass loader that load java core classes like java.lang , java.util etc

2>Variable hold the state of the program and method operate on that state.

3> static binds a method to its class name ie Zoo.main. Static content will print only once.

4> The code blocks outside the method are called the instance initializers

5> the constructor runs after all fields and instance initalizer blocks are run

6>octal (017), hexadecimal (0xFF , 0XFF), binary(0b10)(can be 0b or 0B)

7> Unlike the primitive types that hold their values in the memory where the variable is located , references do not hold the value of the object they refer to . Instead reference points to an object by storing the memory address where the object is located.

8>Variables that are not local variables are known are instance variables or class variables or fields.

9> Instance variables or class variables or filed are not required any initiazation , they are given the default values

10>Boolean 0; byte,short, int, long 0; float, double 0.0; char Null; other null;

11> Local variable

Instance variables

Class variables

12>switch support byte, short, char , int and String, enum but does not support Boolean and long and double

13> only checked exceptions must be handled or declared , otherwise code failed to compile. Since checked exception like sql or io exception, compiler know that it can cause exception it it not necessary in case of unchecked exception like arithemetic exception

14>Instance variables are given default values, ie null if it's an object reference, 0 if it's an int.Local variables don't get default values, and therefore need to be explicitly initialized (and the compiler usually complains if you fail to do this).

15> logical operator And(&) or(|) and exclusive or (^)

16> an object is eligible for gc when there is no reference to that object.

17> we cannot access non static field from the static method because static member are called when the class is loaded we have to see the instance or non static member which is not loaded or existence till as we have not created any instance till now so ambiguity.

18>**overriding method** should not throw checked exceptin that are new or broader than the ones declared yb the overridden method

19> Smaller data types namely byte short and char are first promoted to int any time if they are used with a java binary arithmetic operator even if neither of the operands is int.

20> no access modifier can be used inside method

21> static content can never use this since static content does not belong to any instance, it belongs to a class

Ques: different between static and default method of the interface and abstract class

2> difference between Integer.valueof() and Integer.decode()

Ques 43 ,50,51,61 not complete so check it

Subject wise 6 working with encapsulation try to run it

Shweta slide for java

4 slide->Cannot make a static reference to the non-static method ::

5 slide-> if a class doesn’t extend another class it immediately add the extends java.lang.Object to the class definition if the class extends another class then java doesn’t extends it.

The super() may only be used as the first statement of the constructor

Some important question as a junior developer

What is the requirement of so many classes in design pattern

<https://softwareengineering.stackexchange.com/questions/369154/why-do-we-need-so-many-classes-in-design-patterns>

to make it easy to debug and test

I would suggest that a successful software product will be only created once but modified many, many times.

Complexity comes from the relations not elements

Different between overloading, overriding, shadowing, hiding, and obscuring

<https://programming.guide/java/overloading-overriding-shadowing-hiding-obscuring.html>

<https://docs.oracle.com/javase/tutorial/java/IandI/override.html>

<https://www.geeksforgeeks.org/can-override-private-methods-java/>

<https://www.quora.com/What-is-method-hiding-in-Java-Which-method-will-execute-in-a-method-hiding-superclass-or-subclass>

<https://www.tutorialspoint.com/What-is-the-difference-between-method-hiding-and-method-overriding-in-Java>

https://stackoverflow.com/questions/10594052/overriding-vs-hiding-java-confused

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Java exam review

Diag 1

Ques2->

Widening castin

*byte --> short --> int --> long --> float --> double*

*so when initialising array we can use byte, short, int and char but not long or float*

*ques6->*

*Arrays.sort can not be used for two dimensional arrays*

*Ques7-> checked exception must be handled or declared to be thrown*

*Exception and error class extend throwable class*

*Declared exception like main(String[] str) throws ClassNotFoundException{}*

*Handle exception like throw new or try catch block*

*Ques 17->*

*For or while loop same variable initialise does not allow*

*Ques 18->*

*If in line 6 it would be like int x=1;*

*Then it would print 1210 not 123*

*Ques20-> It is illegal to use static with top level class declaration*

*Ques 21-> It is for the package declaration not the import case*

*Ques 22->remain in for loop if for(1;2;3)*

*First 1 and 2 is run then the block for it*

*Ques 27->*

*At line 9 the continue statement always block the line 10 from the running not in the case of earlier question*

*Ques 36-> “If” statement has one “else” statement but can be many “if else” statement*

*Ques 39->*

(&), (|), and (^), may be applied to both numeric and boolean data

types.

*Please not confuse with logical operator(&, ^, |)(only for Boolean) bitwise operator(&, ^, |) [only for number] and conditional operator (&&, ||) they are also called the short-circuit operators. They are same except in some case conditional case right hand side may run.*

Eg More popular if (x!= null && x.getvalue);

Inclusive OR is only false if both operands are false.

Exclusive OR is only true if the operands are different.

*Ques 58->wrapper class character has one constructor which takes char the parameter.*