Core Java - Interview Questions and Answers:

97. What are the legal operands of the instanceof operator?

The left operand is an object reference or null value and the right operand is a class, interface, or array type.

98. Are true and false keywords?

The values true and false are not keywords.

99. What happens when you add a double value to a String?

The result is a String object.

100. What is the diffrence between inner class and nested class?

When a class is defined within a scope od another class, then it becomes inner class. If the access modifier of the inner class is static, then it becomes nested class.

101. Can an abstract class be final?

An abstract class may not be declared as final.

102. What is numeric promotion?

Numeric promotion is the conversion of a smaller numeric type to a larger numeric type, so that integer and floating-point operations may take place. In numerical promotion, byte, char, and short values are converted to int values. The int values are also converted to long values, if necessary. The long and float values are converted to double values, as required.

103. What is the difference between a public and a non-public class?

A public class may be accessed outside of its package. A non-public class may not be accessed outside of its package.

104. To what value is a variable of the boolean type automatically initialized?

The default value of the boolean type is false.

105. What is the difference between the prefix and postfix forms of the ++ operator?

The prefix form performs the increment operation and returns the value of the increment operation. The postfix form returns the current value all of the expression and then performs the increment operation on that value.

106. What restrictions are placed on method overriding?

Overridden methods must have the same name, argument list, and return type. The overriding method may not limit the access of the method it overrides. The overriding method may not throw any exceptions that may not be thrown by the overridden method.

107. What is a Java package and how is it used?

A Java package is a naming context for classes and interfaces. A package is used to create a separate name space for groups of classes and interfaces. Packages are also used to organize related classes and interfaces into a single API unit and to control accessibility to these classes and interfaces.

108. What modifiers may be used with a top-level class?

A top-level class may be public, abstract, or final.

109. What is the difference between an if statement and a switch statement?

The if statement is used to select among two alternatives. It uses a boolean expression to decide which alternative should be executed. The switch statement is used to select among multiple alternatives. It uses an int expression to determine which alternative should be executed.

110. What are the practical benefits, if any, of importing a specific class rather than an entire package (e.g. import java.net.\* versus import java.net.Socket)?

It makes no difference in the generated class files since only the classes that are actually used are referenced by the generated class file. There is another practical benefit to importing single classes, and this arises when two (or more) packages have classes with the same name. Take java.util.Timer and javax.swing.Timer, for example. If I import java.util.\* and javax.swing.\* and then try to use "Timer", I get an error while compiling (the class name is ambiguous between both packages). Let's say what you really wanted was the javax.swing.Timer class, and the only classes you plan on using in java.util are Collection and HashMap. In this case, some people will prefer to import java.util.Collection and import java.util.HashMap instead of importing java.util.\*. This will now allow them to use Timer, Collection, HashMap, and other javax.swing classes without using fully qualified class names in.

111. Can a method be overloaded based on different return type but same argument type ?

No, because the methods can be called without using their return type in which case there is ambiquity for the compiler.

112. What happens to a static variable that is defined within a method of a class ?

Can't do it. You'll get a compilation error.

113. How many static initializers can you have ?

As many as you want, but the static initializers and class variable initializers are executed in textual order and may not refer to class variables declared in the class whose declarations appear textually after the use, even though these class variables are in scope.

114. What is the difference between method overriding and overloading?

Overriding is a method with the same name and arguments as in a parent, whereas overloading is the same method name but different arguments

115. What is constructor chaining and how is it achieved in Java ?

A child object constructor always first needs to construct its parent (which in turn calls its parent constructor.). In Java it is done via an implicit call to the no-args constructor as the first statement.

116. What is the difference between the Boolean & operator and the && operator?

If an expression involving the Boolean & operator is evaluated, both operands are evaluated. Then the & operator is applied to the operand. When an expression involving the && operator is evaluated, the first operand is evaluated. If the first operand returns a value of true then the second operand is evaluated. The && operator is then applied to the first and second operands. If the first operand evaluates to false, the evaluation of the second operand is skipped.

117. Which Java operator is right associative?

The = operator is right associative.

118. Can a double value be cast to a byte?

Yes, a double value can be cast to a byte.

119. What is the difference between a break statement and a continue statement?

A break statement results in the termination of the statement to which it applies (switch, for, do, or while). A continue statement is used to end the current loop iteration and return control to the loop statement.

120. Can a for statement loop indefinitely?

Yes, a for statement can loop indefinitely. For example, consider the following: for(;;);

121. To what value is a variable of the String type automatically initialized?

The default value of an String type is null.

122. What is the difference between a field variable and a local variable?

A field variable is a variable that is declared as a member of a class. A local variable is a variable that is declared local to a method.

123. How are this() and super() used with constructors?

this() is used to invoke a constructor of the same class. super() is used to invoke a superclass constructor.

124. What does it mean that a class or member is final?

A final class cannot be inherited. A final method cannot be overridden in a subclass. A final field cannot be changed after it's initialized, and it must include an initializer statement where it's declared.

125. What does it mean that a method or class is abstract?

An abstract class cannot be instantiated. Abstract methods may only be included in abstract classes. However, an abstract class is not required to have any abstract methods, though most of them do. Each subclass of an abstract class must override the abstract methods of its superclasses or it also should be declared abstract.

126. What is a transient variable?

Transient variable is a variable that may not be serialized.

127. How does Java handle integer overflows and underflows?

It uses those low order bytes of the result that can fit into the size of the type allowed by the operation.

128. What is the difference between the >> and >>> operators?

The >> operator carries the sign bit when shifting right. The >>> zero-fills bits that have been shifted out.

129. Is sizeof a keyword?

The sizeof operator is not a keyword.