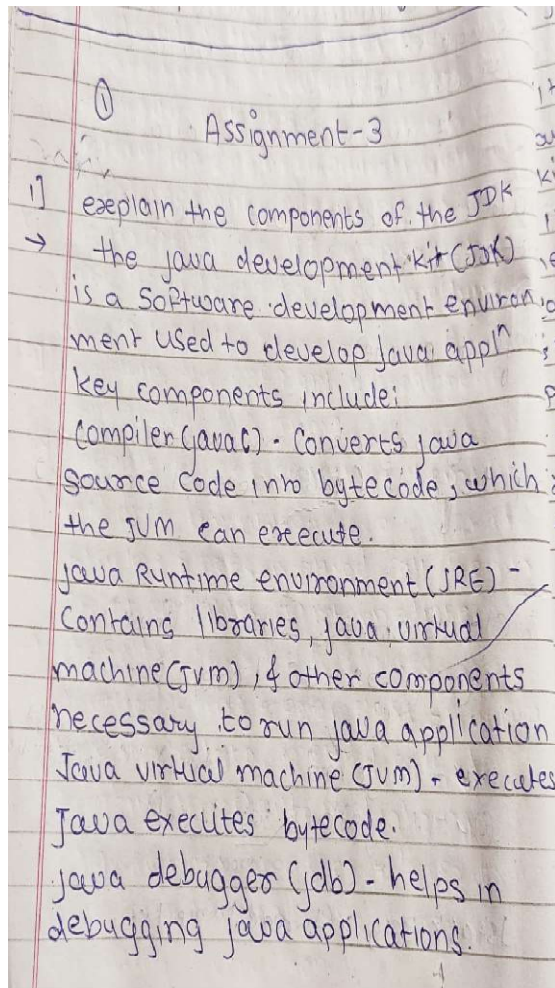


1) Explain the components of the JDK.



2) Differentiate between JDK, JVM, and JRE.

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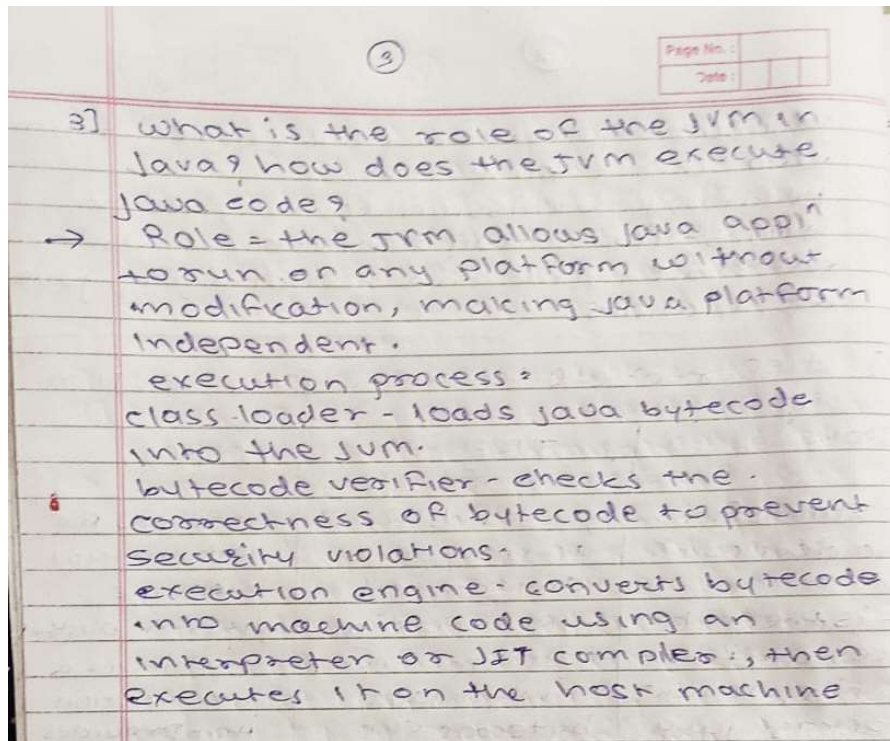
javahelp - generates documentation from java source code.

javafx, java mission control, other tools - for building graphical user interface monitoring & managing java applications.

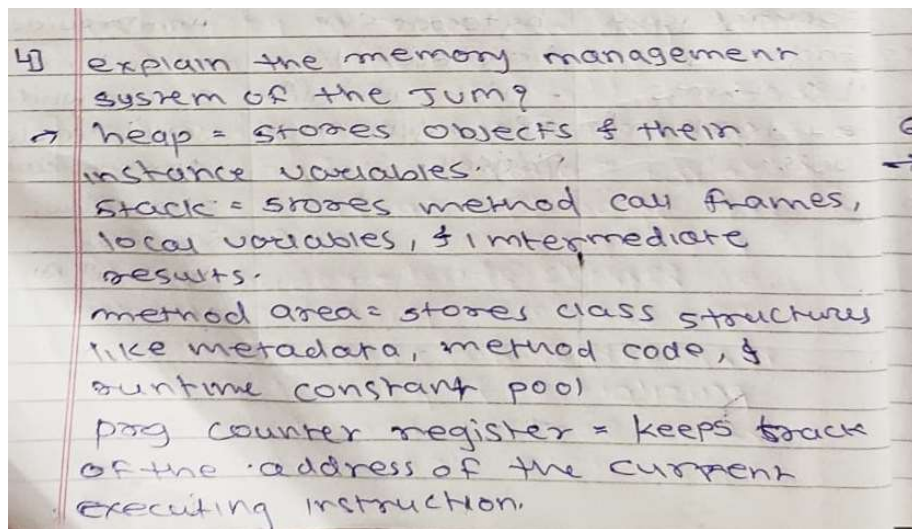
2] differentiate between JDK, JRE, JVM

JDK	JRE	JVM
<ul style="list-style-type: none"> - It stands for java development kit. - It is the tool necessary to compile, document & package java programs. - It contains java & development tools. 	<ul style="list-style-type: none"> - It stands for java runtime environment - JRE refers to runtime environment in which java bytecode can be executed. - It's an implementation of the JVM which physically exists. 	<ul style="list-style-type: none"> - It stands for java virtual machine. - It is an abstract machine is a specification that provides runtime environment in which java bytecode can be executed. - JVM follows specification, implementation, runtime instance.

3) What is the role of the JVM in Java? & How does the JVM execute Java code?

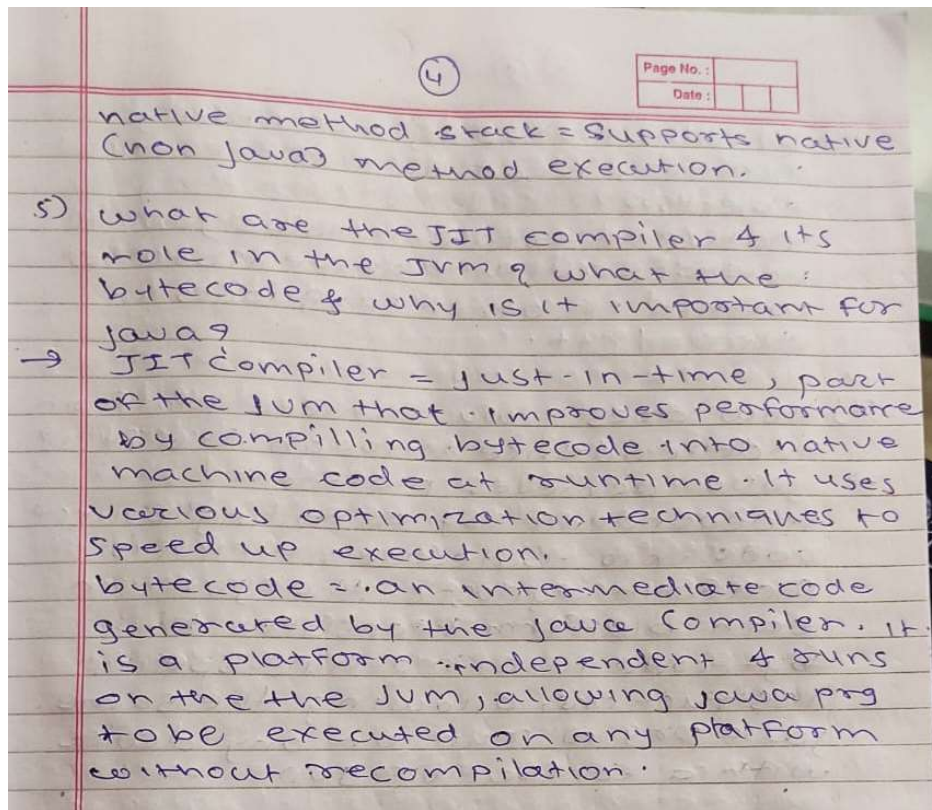


4) Explain the memory management system of the JVM.

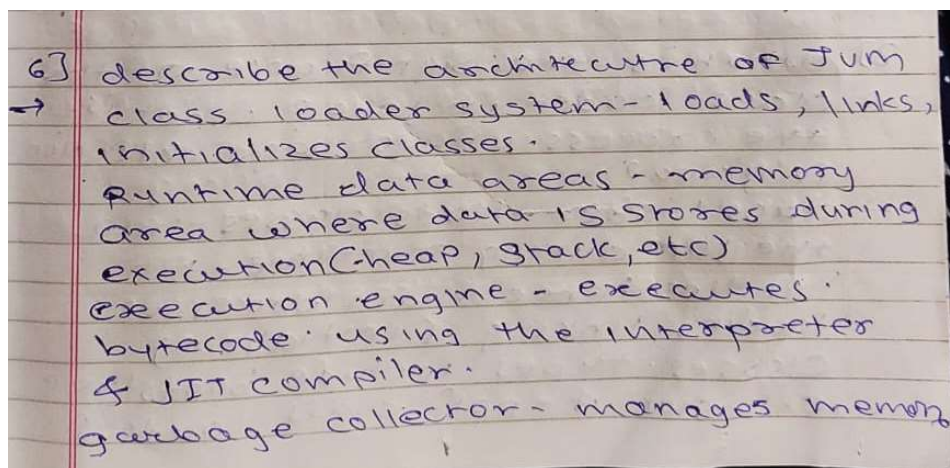


5) What are the JIT compiler and its role in the JVM? What is the bytecode and why is it

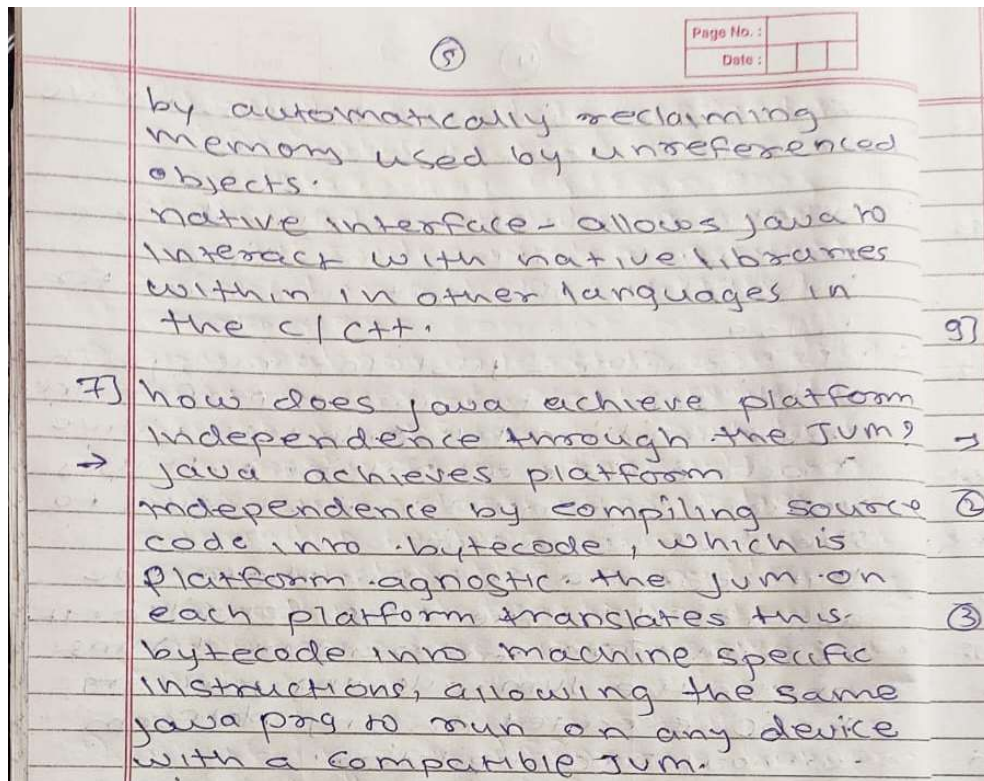
important for Java?



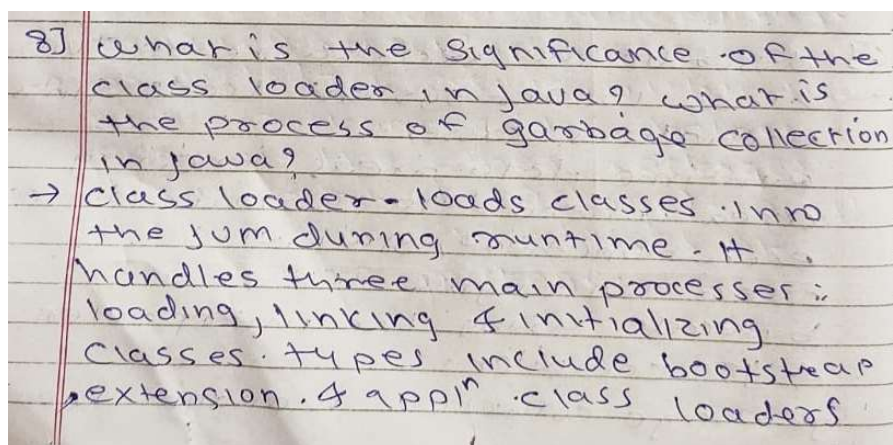
6) Describe the architecture of the JVM. 7) How does Java achieve platform independence through the JVM?



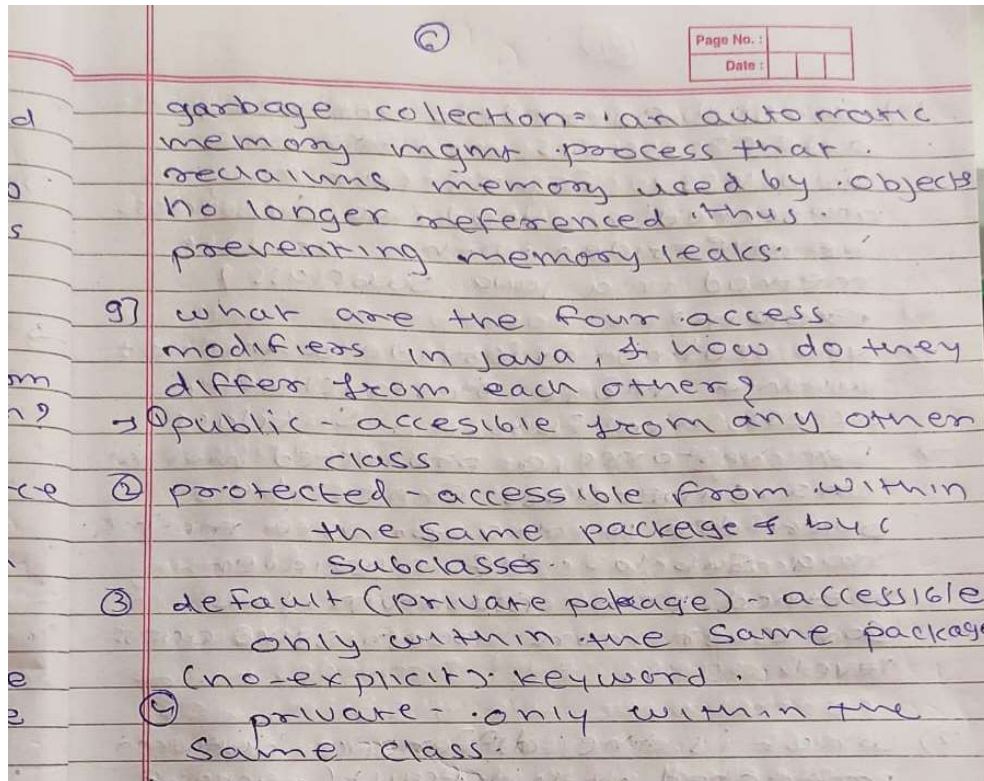
. 7) How does Java achieve platform independence through the JVM?



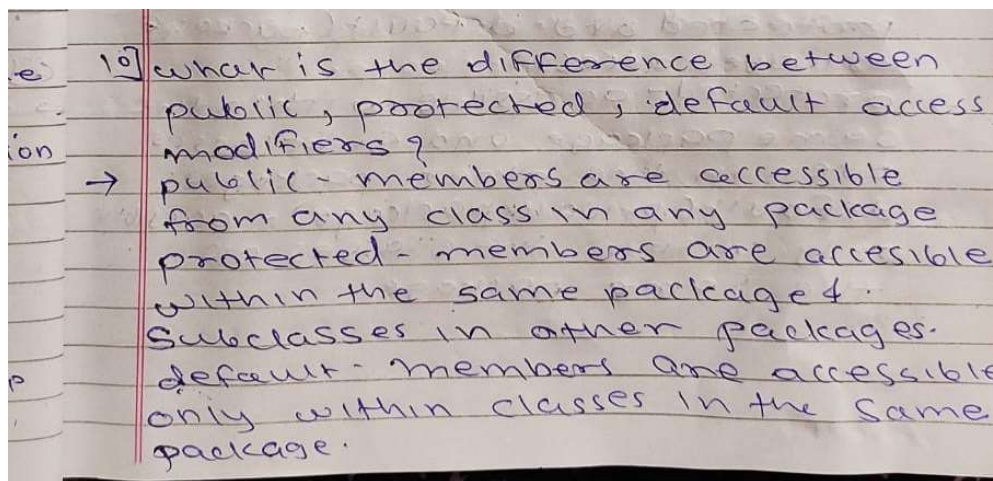
8) What is the significance of the class loader in Java? What is the process of garbage collection in Java.?



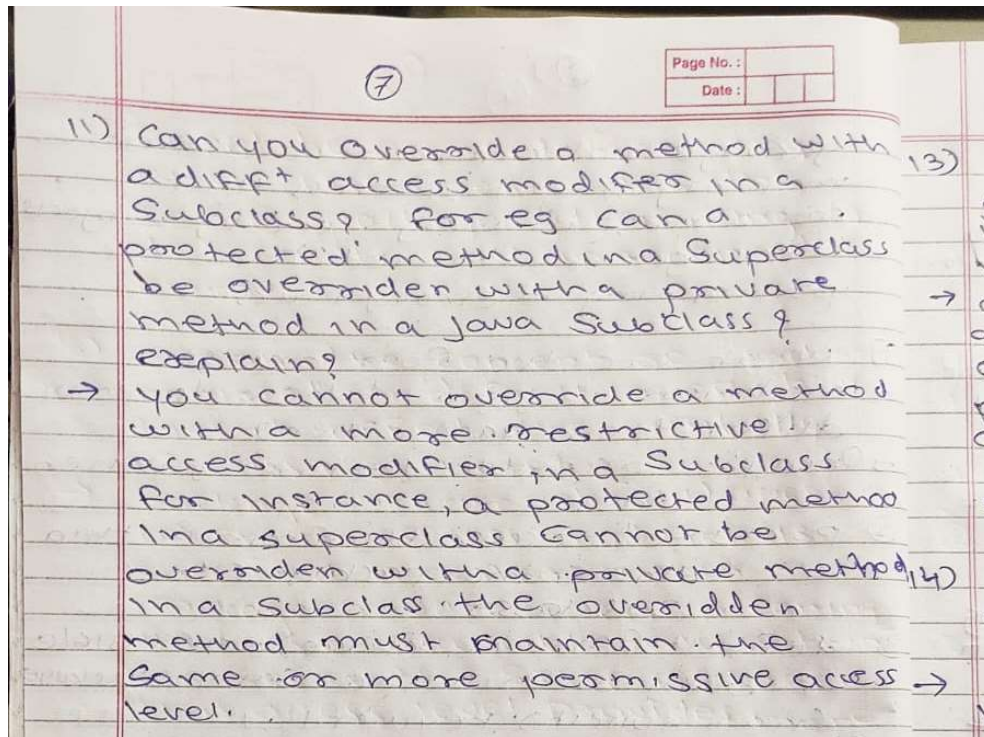
9) What are the four access modifiers in Java, and how do they differ from each other?



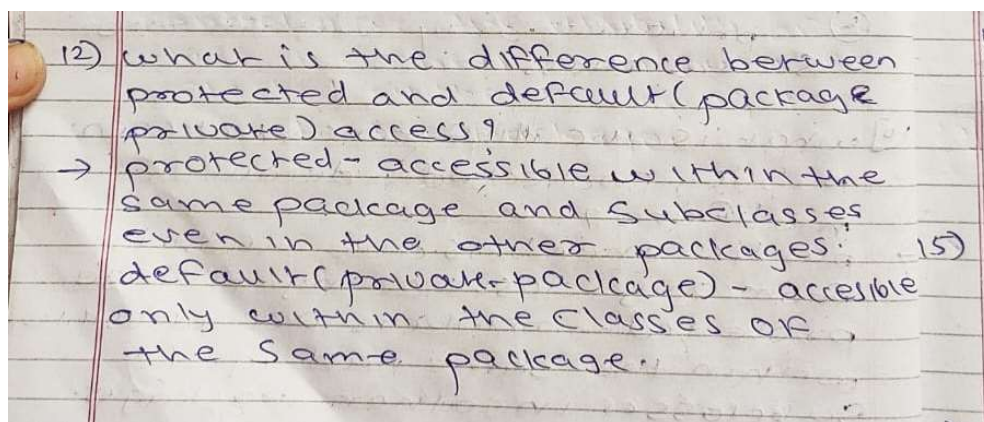
10) What is the difference between public, protected, and default access modifiers?



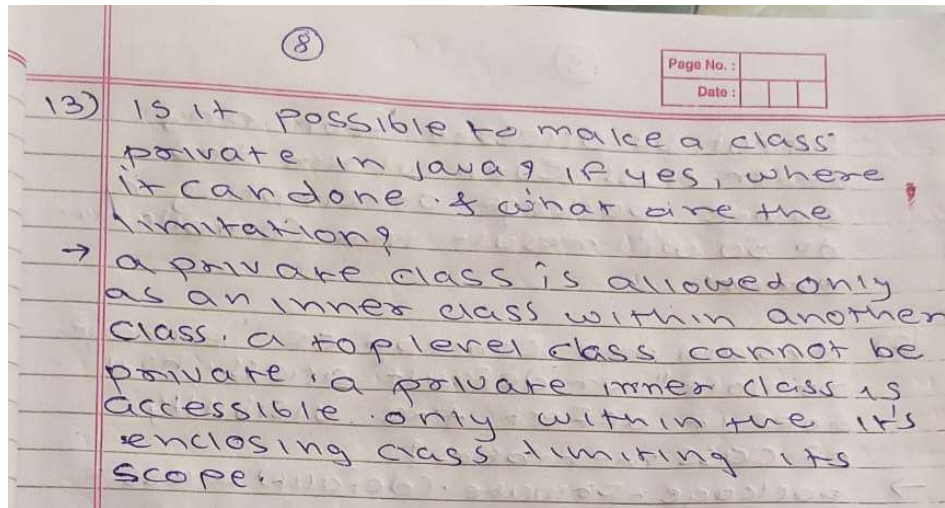
11) Can you override a method with a different access modifier in a subclass? For example, can a protected method in a superclass be overridden with a private method in a subclass? Explain.



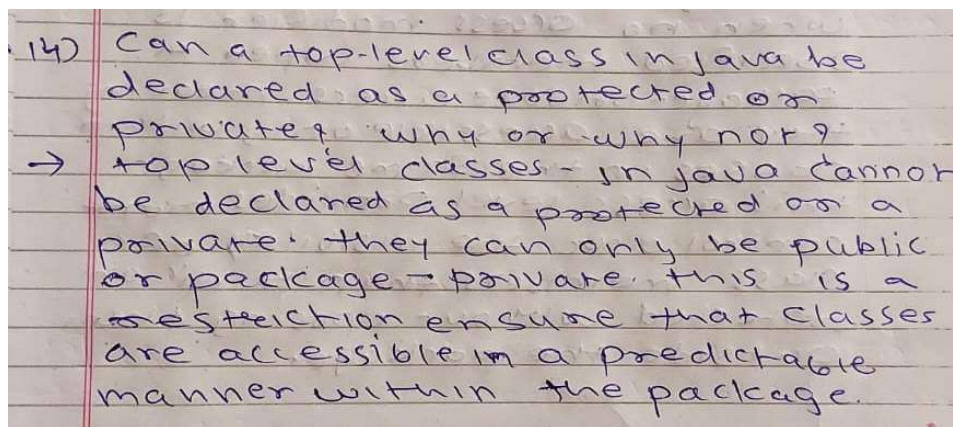
12) What is the difference between protected and default (package-private) access?



13) Is it possible to make a class private in Java? If yes, where can it be done, and what are the limitations?



14) Can a top-level class in Java be declared as protected or private? Why or why not?



15) What happens if you declare a variable or method as private in a class and try to access it from another class within the same package?

15) What happens if you declare a variable or method as a private in a class and try to access it from another class within the same package?

→ If you declare a variable or method as private in a class it

16) Explain the concept of "package-private" or "default" access. How does it affect the visibility of class members?

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Cannot be accessed from any other class even within the same package. attempting to do so will result in a compilation error.

16) explain the concept of "package-private" or "default" access. how does it affect the visibility of class members?

→ package-private (default) access = when no access modifier is specified members when a package-private access meaning they are accessible only within classes in the same package. this access level provides more control over the visibility of a class members than public or protected without exposing them outside the package.