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| What is the static variable? | 1. The static variable is used to refer to the common property of all objects (that is not unique for each object), e.g., 2. The company name of employees, college name of students, etc. 3. Static variable gets memory only once in the class area at the time of class loading. 4. Using a static variable makes your program more memory efficient (it saves memory). 5. Static variable belongs to the class rather than the object. |
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| What is the static method? | 1. A static method belongs to the class rather than the object. 2. There is no need to create the object to call the static methods. 3. A static method can access and change the value of the static variable. |
| restrictions that are applied to the Java static methods | 1. The static method can not use non-static data member or call the non-static method directly. 2. this and super cannot be used in static context as they are non-static. |
| Why is the main method static? | Because the object is not required to call the static method. If we make the main method non-static, JVM will have to create its object first and then call main() method which will lead to the extra memory allocation. |
| Can we override the static methods? | No, we can't override static methods. |
| What is the static block? | 1. Static block is used to initialize the static data member. 2. It is executed before the main method, at the time of class loading. |
| Can we execute a program without main() method? | No, one of the ways was the static block, but it was possible till JDK 1.6. Since JDK 1.7, it is not possible to execute a Java class without the |
| What if the static modifier is removed from the signature of the main method? | Program compiles. However, at runtime, It throws an error "NoSuchMethodError." |
| What is the difference between static (class) method and instance method? |  |
| Can we make constructors static? | As we know that the static context (method, block, or variable) belongs to the class, not the object. Since Constructors are invoked only when the object is created, there is no sense to make the constructors static. However, if you try to do so, the compiler will show the compiler error. |
| Can we make the abstract methods static in Java? | In Java, if we make the abstract methods static, It will become the part of the class, and we can directly call it which is unnecessary. Calling an undefined method is completely useless therefore it is not allowed. |
| Can we declare the static variables and methods in an abstract class? | Yes, we can declare static variables and methods in an abstract method. |
| Can we Overload static methods in Java | Yes, you can overload a static method in Java. |
| Can we have multiple static blocks in our code? | Yes, we can have more than one static block in our code. It will be executed in the same order it is written. |
| **What is a static class?** | 1. In Java only nested classes are allowed to be declared as static, a **top level** class cannot be declared as static. 2. Even though static classes are nested inside a class, they doesn’t need the reference of the outer class they act like outer class only. |
| Can Interface in Java have static methods in it ? | Java 8 : Static method, default method in java |
| Can abstract class have static variable in it ? | Yes, an abstract class can have static variables in it. |
| non-static method cannot be referenced from a static context ? | True |