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| **Java Overview** |
| **A Java Program** |
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| Please explain a simple Java program? |
| * To compile: javac Simple.java * To execute: java Simple * Output:Hello Java * class keyword is used to declare a class in java. * public keyword is an access modifier which represents visibility, it means it is visible to all. * static is a keyword, a non-access modifier if we declare any method as static, it is known as static method.   The core advantage of static method is that there is no need to create object to invoke the static method.   * void is the return type of the method, it means it doesn't return any value. * The main method is executed by the JVM, so it doesn't require creating object to invoke the main method. So it saves memory.   main represents startup of the program.   * String[] args or String args[] is used for command line argument. * System.*out*.println() is used print statement. |
| How many ways can we write a public static void main(String args[]) line ? |
| * By changing sequence of the modifiers, method prototype is not changed.   static public void main(String args[])   * Subscript notation in java array can be used after type, before variable or after variable.   public static void main(String[] args)  public static void main(String []args)  public static void main(String args[])     * You can provide var-args support to main method by passing 3 ellipses (dots)   public static void main(String... args)   * Having semicolon at the end of class in java is *optional*.   class A{  static public void main(String... args)  { System.out.println("hello java4"); }  }; |
| List out some of the valid java main method signature? |
| 1. public static void main(String[] args)  2. public static void main(String []args)  3. public static void main(String args[])  4. public static void main(String... args)  5. static public void main(String[] args)  6. public static final void main(String[] args)  7. final public static void main(String[] args)  8. final strictfp public static void main(String[] args) |
| List out some of invalid java main method signature? |
| 1. You need main method as static, so that it can be called without creating object.  public void main(String[] args)    2. You need main method to be public to call it from JVM  static void main(String[] args)  3. Return type cannot be before modifier  public void static main(String[] args)  4. Abstract method has no relevance if it cannot be overridden. Static methods cannot be overridden  abstract public static void main(String[] args) |
| Can I save java source file by other name than the class name?  Can I have multiple classes in the same source file? |
| File name : ABC.java  To compile : javac ABC.java  To run :  a. java A  output: hi hello  b. java B  output: hello       * Notice that none of the classes are marked public therefore giving them default access. Files without any public classes have no file naming restrictions.   As long as you don't have a public class in your source file, you can name your source file to any name and can compile.   * If you have public class in your source file, that file should have the name same as your public class name. Otherwise, compiler will throw an error.   That’s the reason, you can have any number of classes in Source file, but only one of them can be public class. |
| Can we declare multiple main() methods in multiple classes? |
| * Yes, we can write multiple main methods in different classes (even in same class with some restrictions).        * We can compile both classes without error.      * While running jvm recognize only one main method which class we have mentioned in running. |
| Can a Java program contain more than one "main" method in a class? |
| * As long as method parameters (number (or) type) are different, yes they can. It is called overloading.   Example 1 :-      Note : main(int args[]) and main() never executed even with empty or numeric argument  Example 2 :- |
| What will be the output of below program? |
|  |
| What will be the output of below program? |
| Output : |
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| Output : |
| If I don't provide any arguments on the command line, then the String array of Main method will be empty or null? |
| It is empty. But not null. |