



Q1: Find the syntax and runtime errors for each of the following code segments.

S.N	Code Segment	Errors
1	<pre>int[ ] arr = new int[9.5];</pre>	
2	<pre>int[] arr = new int[4]; arr[0] = 18; arr[1] = 3.5; arr[2] = 15.0; arr[3] = 'A';</pre>	
3	<pre>String[] list = new int[10]; list[-1] = "Sara"; list[0] = "Amal"; list[10] = "Nora";</pre>	
4	<pre>char myArray = new char[5]; myArray[0] = 'A'; myArray[1] = 'B'; myArray[2] = 'C';</pre>	
5	<pre>[]double numbers = new double[10]; numbers[0] = 5; numbers[1] = 6.0; numbers[10] = 8;</pre>	
6	<pre>String[] products; products[0] = "Milk"; products[1] = "Pepsi";</pre>	
7	<pre>double size = 5; int[] ages = new int[size];</pre>	
8	<pre>int[] marks = new int[10]; byte L = marks.length;</pre>	
9	<pre>int[] marks = new int[10]; for (int i = 0; i &lt; marks.length; i++) {     short mark = marks[i];     System.out.println(mark); }</pre>	
10	<pre>int[] marks ; marks[] = new int[10];</pre>	



11	<pre>char[] letters = {'A', 'B', 'C', 'D', "E"}; for (int i = 0; i &lt; letters.length; i++) {     char letter = letters[i];     System.out.println(letter); }</pre>	
12	<pre>double[] decimals = {1,2,3}; decimals[3] = 5.7;</pre>	
13	<pre>double[] decimals = {1,2,3}; for (double i = 0; i &lt; decimals.length; i++)     int decimal = decimals[i];</pre>	
14	<pre>byte a = 4; short b = 5; long c = 6; float d = 4.5F; int[] e = {1, a, b, c, (int)d};</pre>	
15	<pre>double size = 4.5;  double[] numbers1 = new double[size]; double[] numbers2 = new double[(byte) size]; double[] numbers3 = new double[(short) size]; double[] numbers4 = new double[(int) size]; double[] numbers5 = new double[(long) size]; double[] numbers6 = new double[(float) size];</pre>	
16	<pre>int a[] , b[] , c; a = new int[2]; b = new int[2]; c = new int[2];</pre>	
17	<pre>int[] a ,b; a = {1,2,3}; b= new int[3];</pre>	
18	<pre>int[] a = {1, 2, 3}, b ;      b = {1, 2, 3};</pre>	



Q2: Write the output for each of the following code segments.

S.N	Code Segment	Output
1	<pre>char[] letters = {'A', 'B', 'C', 'D'};  for (int i = 0; i &lt; letters.length; i++)     System.out.println(letters[i]);</pre>	
2	<pre>int[] marks = {10, 9, 10, 8, 7, 9};  double total = 0; for (int i = 0; i &lt; marks.length; i++)     total += marks[i];  double average = total / marks.length; System.out.printf("average is : %.2f\n " , average);</pre>	
3	<pre>int[] numbers = new int[5]; for (int i = 0; i &lt; numbers.length; i++) {      System.out.println(numbers[i]); }</pre>	
4	<pre>int[] numbers = new int[5];  for (int i = 0; i &lt; numbers.length; i++) {     numbers[i] = i * 3 + 2;     System.out.println(numbers[i]); }</pre>	
5	<pre>char[] letters = new char[4]; letters[0] = 'A'; letters[1] = 'B'; letters[2] = 'C'; letters[3] = 'D'; int i = 0; while (i &lt; letters.length) {      System.out.printf("%c ", letters[i++]); }</pre>	
6	<pre>int[] arr = new int[3]; arr[0] = 5 + 2; arr[1] = arr[0] * 10; arr[2] = arr[1] - arr[0] - 2;  for (int i = 0; i &lt; arr.length; i++) {     int j = arr[i];     System.out.println(j); }</pre>	



7	<pre>int[] arr = new int[5];  for (int i = 0; i &lt; 5; i++)     arr[i] = i * i;  for (int i = 0; i &lt; arr.length; i++)     arr[i]++;  for (int i = 0; i &lt; arr.length; i++)     System.out.println(arr[i]);</pre>	
8	<pre>byte[] bytes = new byte[6];  for (int i = 0; i &lt; bytes.length; i++) {     bytes[i] = (byte) i++; }  for (int i = 0; i &lt; bytes.length; i++) {     byte aByte = bytes[i];      System.out.println(aByte); }</pre>	
9	<pre>int size = 6; int[] nums = new int[++size];  System.out.println(nums.length); System.out.println(size);  for (int i = 0; i &lt; nums.length; i++)     nums[i] = i * i * i;  for (int i = 2; i &lt; 5; i++) {     System.out.println(nums[i]); }</pre>	
10	<pre>String str = "Java";  char[] chars = new char[str.length()];  for (int i = 0; i &lt; str.length(); i++)     chars[i] = str.charAt(i);  for (int i = 0; i &lt; chars.length; i++)     System.out.println(chars[i]);</pre>	



11	<pre> char[] chars = new char[5];  for (int i = 0, j = 65; i &lt; chars.length; i++) {     chars[i] = (char) j++; } for (int i = chars.length - 1; i &gt; -1; i--) {     char aChar = chars[i];     System.out.println(aChar); } </pre>	
12	<pre> int[] numbers = {11, 17, 30, 5, 9, 37, 100}; for (int i = 0; i &lt; numbers.length; i++) {      if (numbers[i] % 2 == 0) {         System.out.println(numbers[i]);     }  } </pre>	
13	<pre> int[] numbers = {1, 2, 3}; for (int i = 0; i &lt; numbers.length; i++) {      switch (numbers[i]) {         case 2:             if (numbers[i] &gt;= 13)                 System.out.println("i*i-&gt;" + i * i);             else                 System.out.println("i+i-&gt;" + i + i);              break;          case 3:             System.out.println(numbers[++i] = 19);             break;          case 1:             System.out.println(numbers[i+2] = 19);             break;      }     System.out.println(numbers[i]);  } </pre>	
14	<pre> String[] names = {"Sara", "Amal", "Reem", "Shahad"};  for (int i = 0; i &lt; names.length; i++) {     String n = names[i];     for (int j = 0; j &lt; n.length(); j++) {         System.out.println(n.charAt(j));     } } </pre>	



15	<pre> int[] nums = {2,3,4,5};  for (int i = 0; i &lt; nums.length; i++) {      int n = nums[i];     int j = 1;     while (j&lt;11) {          System.out.println(n+"x"+j+"= "+n*j++);     }      System.out.println(); } </pre>	
16	<pre> int[] a = {1, 2, 3}, b = {1, 2, 3};  for (int i = 0; i &lt; a.length; i++) {      for (int j = 0; j &lt; b.length; j++) {          System.out.print(a[i]*b[j]+" ");     }     System.out.println(); } </pre>	

Written with ♥

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Good Luck !