Java 8 Interview Sample Coding Questions

javaconceptoftheday.com/java-8-interview-sample-coding-questions

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Here are the some Java 8 interview sample coding questions with answers. I hope it will be helpful for you guys while preparing for an interview.

Java 8 Interview Sample Coding	Questions Java Concept Of The Day
Separate Odd And Even Numbers	Remove Duplicate Elements From List
listOfIntegers.stream() .collect(Collectors.partitioningBy(i -> i % 2 == 0));	listOfStrings.stream().distinct().collect(Collectors.toList());
Frequency Of Each Character In String	Frequency Of Each Element In An Array
<pre>inputString.chars() .mapToObj(c -> (char) c) .collect(Collectors.groupingBy(Function.identity(), Collectors.counting()));</pre>	<pre>anyList.stream().collect(Collectors.groupingBy(Function.identity(), Collectors.counting()));</pre>
	Join List Of Strings With Prefix, Suffix And Delimiter
Sort The List In Reverse Order	listOfStrings.stream().collect(Collectors.joining("Delimiter", "Prefix", "Suffix"));
any List. stream(). sorted(Comparator.reverseOrder()). for Each(System. out::println);	Maximum & Minimum In A List
Print Multiples Of 5 From The List	listOfIntegers.stream().max(Comparator.naturalOrder()).get();
listOfIntegers.stream() .filter(i -> i % 5 == 0).forEach(System.out::println);	listOfIntegers.stream().min(Comparator.naturalOrder()).get();
Merge Two Unsorted Arrays Into Single Sorted Array	Anagram Program In Java 8
IntStream.concat(Arrays.stream(a),Arrays.stream(b))	s1=Stream.of(s1.split("")).map(String::toUpperCase).sorted().collect
.sorted().toArray();	(Collectors.joining()); s2=Stream.of(s2.split("")).map(String::toUpperCase).sorted().collect
Merge Two Unsorted Arrays Into Single Sorted Array Without Duplicates	(Collectors.joining());
IntStream.concat(Arrays.stream(a),Arrays.stream(b))	If s1 and s2 are equal, then they are anagrams.
.sorted().distinct().toArray(); Three Max & Min Numbers From The List	Sum Of All Digits Of A Number
//Min 3 Numbers	Stream.of(String.valueOf(inputNumber).split("")) .collect(Collectors.summingInt(Integer::parseInt));
listOfIntegers.stream().sorted().limit(3).forEach(System.out::println);	Second Largest Number In An Integer Array
//Max 3 Numbers listOfIntegers.stream().sorted(Comparator.reverseOrder()).limit(3).fo rEach(System.out::println);	listOfIntegers.stream().sorted(Comparator.reverseOrder()).skip(1) .findFirst().get();
Sort List Of Strings In Increasing Order Of Their Length	Common Elements Between Two Arrays
listOfStrings.stream().sorted(Comparator.comparing(String::length)). forEach(System.out::println);	list1.stream().filter(list2::contains).forEach(System.out::println);
Sum & Average Of All Elements Of An Array	Reverse Each Word Of A String
//Sum Arrays.stream(inputArray).sum();	Arrays.stream(str.split(" ")) .map(word -> new StringBuffer(word).reverse()) .collect(Collectors.joining(" "));
//Average Arrays.stream(inputArray).average().getAsDouble();	Sum Of First 10 Natural Numbers
Reverse An Integer Array	IntStream.range(1, 11).sum();
IntStream.rangeClosed(1, array.length) .map(i -> array[array.length - i])	Find Strings Which Start With Number
.toArray(); Palindrome Program In Java 8	listOfStrings.stream() .filter(str -> Character.isDigit(str.charAt(0))) .forEach(System.out::println);
IntStream.range(0, str.length()/2) .noneMatch(i -> str.charAt(i) != str.charAt(str.length() - i -1));	Find Duplicate Elements From An Array
Last Element Of An Array	listOfIntegers.stream() .filter(i -> ! set.add(i))
listOfStrings.stream().skip(listOfStrings.size()-1).findFirst().get();	.collect(Collectors.toSet());
Age Of Person In Years	Fibonacci Series
LocalDate birthDay = LocalDate.of(1985, 01, 23); LocalDate today = LocalDate.now(); System.out.println(ChronoUnit.YEARS.between(birthDay, today));	Stream.iterate(new int[] {0, 1}, f -> new int[] {f[1], f[0]+f[1]}) .limit(10) .map(f -> f[0]) .forEach(i -> System.out.print(i+" "));

Java 8 Interview Coding Questions And Answers :

1) Given a list of integers, separate odd and even numbers?

```
1
    import java.util.Arrays;
2
    import java.util.List;
3
    import java.util.Map;
4
   import java.util.Map.Entry;
5
    import java.util.Set;
6
    import java.util.stream.Collectors;
7
    public class Java8Code
8
9
    public static void main(String[] args)
10
    List<Integer> listOfIntegers = Arrays.asList(71, 18, 42, 21, 67, 32, 95, 14, 56, 87);
11
12
    Map<Boolean, List<Integer>> oddEvenNumbersMap =
13
    listOfIntegers.stream().collect(Collectors.partitioningBy(i -> i % 2 == 0));
14
15
    Set<Entry<Boolean, List<Integer>>> entrySet = oddEvenNumbersMap.entrySet();
16
17
    for (Entry<Boolean, List<Integer>> entry : entrySet)
18
19
    System.out.println("----");
20
21
    if (entry.getKey())
23 System.out.println("Even Numbers");
24 }
25 else
26
    System.out.println("Odd Numbers");
27
28
29
    System.out.println("----");
30
31
    List<Integer> list = entry.getValue();
32
33 for (int i : list)
34
35 System.out.println(i);
36
37
38
39
40
41
42
```

Odd Numbers

Even Numbers

2) How do you remove duplicate elements from a list using Java 8 streams?

```
1
    import java.util.Arrays;
2
    import java.util.List;
3
    import java.util.stream.Collectors;
4
    public class Java8Code
5
6
    public static void main(String[] args)
7
    List<String> listOfStrings = Arrays.asList("Java", "Python", "C#", "Java", "Kotlin",
8
    "Python");
9
10
    List<String> uniqueStrngs = listOfStrings.stream().distinct().collect(Collectors.toList());
11
12
    System.out.println(uniqueStrngs);
13
14
15
```

Output:

[Java, Python, C#, Kotlin]

3) How do you find frequency of each character in a string using Java 8 streams?

```
1
   import java.util.Map;
2
   import java.util.function.Function;
3
   import java.util.stream.Collectors;
4
    public class Java8Code
5
   public static void main(String[] args)
6
7
   String inputString = "Java Concept Of The Day";
8
9
   Map<Character, Long> charCountMap =
10
    inputString.chars()
11
    .mapToObj(c -> (char) c)
12
    .collect(Collectors.groupingBy(Function.identity(), Collectors.counting()));
13
14 System.out.println(charCountMap);
15 }
16
17
18
```

Output:

```
{ =4, a=3, c=1, C=1, D=1, e=2, f=1, h=1, J=1, n=1, O=1, o=1, p=1, T=1, t=1, v=1, y=1}
```

4) How do you find frequency of each element in an array or a list?

```
1
    import java.util.Arrays;
2
   import java.util.List;
3
   import java.util.Map;
4
   import java.util.function.Function;
5
   import java.util.stream.Collectors;
6
   public class Java8Code
7
8
   public static void main(String[] args)
9
   List<String> stationeryList = Arrays.asList("Pen", "Eraser", "Note Book", "Pen", "Pencil",
10
    "Stapler", "Note Book", "Pencil");
11
12
    Map<String, Long> stationeryCountMap =
13
   stationeryList.stream().collect(Collectors.groupingBy(Function.identity(),
14
   Collectors.counting()));
15
16 System.out.println(stationeryCountMap);
17
18 }
```

{Pen=2, Stapler=1, Pencil=2, Note Book=2, Eraser=1}

5) How do you sort the given list of decimals in reverse order?

```
import java.util.Arrays;
2
    import java.util.Comparator;
3
    import java.util.List;
4
    public class Java8Code
5
    public static void main(String[] args)
6
7
    List<Double> decimalList = Arrays.asList(12.45, 23.58, 17.13, 42.89, 33.78, 71.85, 56.98,
8
9
10
    decimalList.stream().sorted(Comparator.reverseOrder()).forEach(System.out::println);
11
12
13
```

Output:

71.85

56.98 42.89

33.78

23.58

21.12

17.13

12.45



6) Given a list of strings, join the strings with '[' as prefix, ']' as suffix and ',' as delimiter?

```
import java.util.Arrays;
    import java.util.List;
3
    import java.util.stream.Collectors;
    public class Java8Code
5
6
7
   public static void main(String[] args)
8
    String joinedString = listOfStrings.stream().collect(Collectors.joining(", ", "[", "]"));
9
10
    System.out.println(joinedString);
11
12
13
14
15
```

Output:

7) From the given list of integers, print the numbers which are multiples of 5?

```
1
    import java.util.Arrays;
2
    import java.util.List;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    List<Integer> listOfIntegers = Arrays.asList(45, 12, 56, 15, 24, 75, 31, 89);
7
8
    listOfIntegers.stream().filter(i -> i % 5 == 0).forEach(System.out::println);
9
10
11
12
```

45

15

75

8) Given a list of integers, find maximum and minimum of those numbers?

```
import java.util.Arrays;
2
   import java.util.Comparator;
3
   import java.util.List;
4
   public class Java8Code
5
   public static void main(String[] args)
6
7
   List<Integer> listOfIntegers = Arrays.asList(45, 12, 56, 15, 24, 75, 31, 89);
8
9
   int max = listOfIntegers.stream().max(Comparator.naturalOrder()).get();
10
11
   System.out.println("Maximum Element : "+max);
12
13
   int min = listOfIntegers.stream().min(Comparator.naturalOrder()).get();
14
15
    System.out.println("Minimum Element : "+min);
16
17
18
19
```

Output:

Maximum Element: 89 Minimum Element: 12

9) How do you merge two unsorted arrays into single sorted array using Java 8 streams?

```
1
    import java.util.Arrays;
2
    import java.util.stream.IntStream;
3
    public class Java8Code
4
    public static void main(String[] args)
5
6
    int[] a = new int[] {4, 2, 7, 1};
7
8
    int[] b = new int[] {8, 3, 9, 5};
9
10
    int[] c = IntStream.concat(Arrays.stream(a), Arrays.stream(b)).sorted().toArray();
11
12
    System.out.println(Arrays.toString(c));
13
14
15
16
```

[1, 2, 3, 4, 5, 7, 8, 9]

10) How do you merge two unsorted arrays into single sorted array without duplicates?

```
import java.util.Arrays;
2
    import java.util.stream.IntStream;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    int[] a = new int[] {4, 2, 5, 1};
7
8
    int[] b = new int[] {8, 1, 9, 5};
9
10
    int[] c = IntStream.concat(Arrays.stream(a), Arrays.stream(b)).sorted().distinct().toArray();
11
12
    System.out.println(Arrays.toString(c));
13
14
15
16
```

Output:

[1, 2, 4, 5, 8, 9]

11) How do you get three maximum numbers and three minimum numbers from the given list of integers?

```
1
    import java.util.Arrays;
2
    import java.util.Comparator;
3
    import java.util.List;
4
    public class Java8Code
5
    public static void main(String[] args)
6
7
    List<Integer> listOfIntegers = Arrays.asList(45, 12, 56, 15, 24, 75, 31, 89);
8
9
10
    System.out.println("----");
11
12
    System.out.println("Minimum 3 Numbers");
13
14
    System.out.println("----");
15
16
    listOfIntegers.stream().sorted().limit(3).forEach(System.out::println);
17
18
20
21 System.out.println("Maximum 3 Numbers");
22
23 System.out.println("----");
24
    listOfIntegers.stream().sorted(Comparator.reverseOrder()).limit(3).forEach(System.out::println);
25
26
27
28
29
30
31
Output:
Minimum 3 Numbers
```

Maximum 3 Numbers

12) Java 8 program to check if two strings are anagrams or not?

```
1
    import java.util.stream.Collectors;
2
    import java.util.stream.Stream;
3
    public class Java8Code
4
   public static void main(String[] args)
5
6
    String s1 = "RaceCar";
7
   String s2 = "CarRace";
8
9
   s1 = Stream.of(s1.split("")).map(String::toUpperCase).sorted().collect(Collectors.joining());
10
11
    s2 = Stream.of(s2.split("")).map(String::toUpperCase).sorted().collect(Collectors.joining());
12
13
   if (s1.equals(s2))
14
15 System.out.println("Two strings are anagrams");
16
17 else
18
   System.out.println("Two strings are not anagrams");
19
20
21
22
23
24
```

Two strings are anagrams

13) Find sum of all digits of a number in Java 8?

```
1
    import java.util.stream.Collectors;
2
    import java.util.stream.Stream;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    int i = 15623;
7
8
    Integer sumOfDigits =
9
    Stream.of(String.valueOf(i).split("")).collect(Collectors.summingInt(Integer::parseInt));
10
11
    System.out.println(sumOfDigits);
12
13
14
```

Output:

17

14) Find second largest number in an integer array?

```
1
    import java.util.Arrays;
2
    import java.util.Comparator;
3
   import java.util.List;
4
   public class Java8Code
5
   public static void main(String[] args)
6
7
   List<Integer> listOfIntegers = Arrays.asList(45, 12, 56, 15, 24, 75, 31, 89);
8
9
   Integer secondLargestNumber =
10
    listOfIntegers.stream().sorted(Comparator.reverseOrder()).skip(1).findFirst().get();
11
12
   System.out.println(secondLargestNumber);
13
14
15
```

75

15) Given a list of strings, sort them according to increasing order of their length?

```
1
    import java.util.Arrays;
2
    import java.util.Comparator;
3
    import java.util.List;
4
    public class Java8Code
5
    public static void main(String[] args)
6
7
    List<String> listOfStrings = Arrays.asList("Java", "Python", "C#", "HTML", "Kotlin", "C++",
8
    "COBOL", "C");
9
10
    listOfStrings.stream().sorted(Comparator.comparing(String::length)).forEach(System.out::println);
11
12
13
```

Output:

С

C#

C++

Java HTML

COBOL

Python

Kotlin

16) Given an integer array, find sum and average of all elements?

```
1
     import java.util.Arrays;
2
     public class Java8Code
3
    public static void main(String[] args)
4
5
    int[] a = new int[] {45, 12, 56, 15, 24, 75, 31, 89};
6
7
    int sum = Arrays.stream(a).sum();
8
9
10 System.out.println("Sum = "+sum);
11
    double average = Arrays.stream(a).average().getAsDouble();
12
13
     System.out.println("Average = "+average);
14
15
16
17
Output:
```

```
Sum = 347
Average = 43.375
```

17) How do you find common elements between two arrays?

```
import java.util.Arrays;
2
    import java.util.List;
3
   public class Java8Code
4
   public static void main(String[] args)
5
6
   List<Integer> list1 = Arrays.asList(71, 21, 34, 89, 56, 28);
7
8
   List<Integer> list2 = Arrays.asList(12, 56, 17, 21, 94, 34);
9
10
   list1.stream().filter(list2::contains).forEach(System.out::println);
11
12
13
14
```

Output:

21

34

56

18) Reverse each word of a string using Java 8 streams?

```
1
    import java.util.Arrays;
2
    import java.util.stream.Collectors;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    String str = "Java Concept Of The Day";
7
8
    String reversedStr = Arrays.stream(str.split(" "))
9
    .map(word -> new StringBuffer(word).reverse())
10
    .collect(Collectors.joining(" "));
11
12
    System.out.println(reversedStr);
13
14
15
16
```

avaJ tpecnoC fO ehT yaD

19) How do you find sum of first 10 natural numbers?

```
1  import java.util.stream.IntStream;
2  public class Java8Code
3  {
4   public static void main(String[] args)
5   {
6   int sum = IntStream.range(1, 11).sum();
7   System.out.println(sum);
9  }
10
11
```

Output:

55

20) Reverse an integer array

```
1
    import java.util.Arrays;
2
    import java.util.stream.IntStream;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    int[] array = new int[] {5, 1, 7, 3, 9, 6};
7
8
    int[] reversedArray = IntStream.rangeClosed(1, array.length).map(i -> array[array.length -
9
   i]).toArray();
10
11
    System.out.println(Arrays.toString(reversedArray));
12
13
14
```

Output:

[6, 9, 3, 7, 1, 5]

21) Print first 10 even numbers

```
1 import java.util.stream.IntStream;
2
   public class Java8Code
3
   public static void main(String[] args)
4
5
   IntStream.rangeClosed(1, 10).map(i -> i * 2).forEach(System.out::println);
6
7
8
9
Output:
```

2

4 6

8

10

12

14

16 18

20

22) How do you find the most repeated element in an array?

```
import java.util.Arrays;
    import java.util.List;
3
    import java.util.Map;
    import java.util.Map.Entry;
    import java.util.function.Function;
6
    import java.util.stream.Collectors;
7
    public class Java8Code
8
    public static void main(String[] args)
9
10
    List<String> listOfStrings = Arrays.asList("Pen", "Eraser", "Note Book", "Pen", "Pencil", "Pen", "Note Book", "Pencil");
11
12
13
    Map<String, Long> elementCountMap = listOfStrings.stream()
14
    .collect(Collectors.groupingBy(Function.identity(), Collectors.counting()));
15
16
    Entry<String, Long> mostFrequentElement =
17
    elementCountMap.entrySet().stream().max(Map.Entry.comparingByValue()).get();
18
19 System.out.println("Most Frequent Element : "+mostFrequentElement.getKey());
20
21 System.out.println("Count : "+mostFrequentElement.getValue());
22
23
```

Output:

Most Frequent Element : Pen

Count: 3

23) Palindrome program using Java 8 streams

```
1
    import java.util.stream.IntStream;
2
    public class Java8Code
3
   public static void main(String[] args)
4
5
   String str = "ROTATOR";
6
7
    boolean isItPalindrome = IntStream.range(0, str.length()/2).
8
    noneMatch(i -> str.charAt(i) != str.charAt(str.length() - i -1));
9
10
    if (isItPalindrome)
11
12
   System.out.println(str+" is a palindrome");
13
14
   else
15
16 System.out.println(str+" is not a palindrome");
17
18
19
20
21
```

ROTATOR is a palindrome

24) Given a list of strings, find out those strings which start with a number?

```
1
    import java.util.Arrays;
2
    import java.util.List;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    List<String> listOfStrings = Arrays.asList("One", "2wo", "3hree", "Four", "5ive", "Six");
7
8
    listOfStrings.stream().filter(str ->
9
    Character.isDigit(str.charAt(0))).forEach(System.out::println);
10
11
12
```

Output:

2wo

3hree 5ive

25) How do you extract duplicate elements from an array?

```
1
    import java.util.Arrays;
2
    import java.util.HashSet;
3
   import java.util.List;
4
   import java.util.Set;
5
   import java.util.stream.Collectors;
6
   public class Java8Code
7
   public static void main(String[] args)
8
9
   List<Integer> listOfIntegers = Arrays.asList(111, 222, 333, 111, 555, 333, 777, 222);
10
11
    Set<Integer> uniqueElements = new HashSet<>();
12
13
   Set<Integer> duplicateElements = listOfIntegers.stream().filter(i -> !
14
   uniqueElements.add(i)).collect(Collectors.toSet());
15
16
    System.out.println(duplicateElements);
17
18
19
```

[333, 222, 111]

26) Print duplicate characters in a string?

```
1
   import java.util.Arrays;
2
   import java.util.HashSet;
3
   import java.util.Set;
4
   import java.util.stream.Collectors;
5
   public class Java8Code
6
7
    public static void main(String[] args)
8
    String inputString = "Java Concept Of The Day".replaceAll("\\s+", "").toLowerCase();
9
10
   Set<String> uniqueChars = new HashSet<>();
11
12
   Set<String> duplicateChars =
13
   Arrays.stream(inputString.split(""))
14
    .filter(ch -> ! uniqueChars.add(ch))
15 .collect(Collectors.toSet());
16
17 System.out.println(duplicateChars);
18
19
20
21
```

Output:

[a, c, t, e, o]

27) Find first repeated character in a string?

```
1
    import java.util.Arrays;
2
   import java.util.LinkedHashMap;
3
   import java.util.Map;
4
   import java.util.function.Function;
5
   import java.util.stream.Collectors;
6
    public class Java8Code
7
8
   public static void main(String[] args)
9
String inputString = "Java Concept Of The Day".replaceAll("\\s+", "").toLowerCase();
11
    Map<String, Long> charCountMap =
12
   Arrays.stream(inputString.split(""))
13
    .collect(Collectors.groupingBy(Function.identity(), LinkedHashMap::new,
14
   Collectors.counting());
15
16 String firstRepeatedChar = charCountMap.entrySet()
17 .stream()
18 .filter(entry -> entry.getValue() > 1)
19 .map(entry -> entry.getKey())
20 .findFirst()
    .get();
21
    System.out.println(firstRepeatedChar);
23
24
25
26
```

а

28) Find first non-repeated character in a string?

```
1
   import java.util.Arrays;
2
   import java.util.LinkedHashMap;
3
   import java.util.Map;
4
    import java.util.function.Function;
5
    import java.util.stream.Collectors;
6
    public class Java8Code
7
8
   public static void main(String[] args)
9
   String inputString = "Java Concept Of The Day".replaceAll("\\s+", "").toLowerCase();
10
11
   Map<String, Long> charCountMap =
   Arrays.stream(inputString.split(""))
    .collect(Collectors.groupingBy(Function.identity(), LinkedHashMap::new,
14 Collectors.counting()));
15
16 String firstNonRepeatedChar = charCountMap.entrySet()
17 .stream()
18 .filter(entry -> entry.getValue() == 1)
19 .map(entry -> entry.getKey())
20 .findFirst()
   .get();
21
22
   System.out.println(firstNonRepeatedChar);
23
24
25
26
```

Output:

j

29) Fibonacci series

```
1
    import java.util.stream.Stream;
2
    public class Java8Code
3
    public static void main(String[] args)
4
5
    Stream.iterate(new int[] \{0, 1\}, f -> new int[] \{f[1], f[0]+f[1]\})
6
    .limit(10)
7
    .map(f -> f[0])
8
    .forEach(i -> System.out.print(i+" "));
9
10
11
12
```

Output:

0 1 1 2 3 5 8 13 21 34

30) First 10 odd numbers

```
1
    import java.util.stream.Stream;
2
    public class Java8Code
3
4
    public static void main(String[] args)
5
    Stream.iterate(new int[] \{1, 3\}, f \rightarrow \text{new int}[] \{f[1], f[1]+2\})
6
    .limit(10)
7
    .map(f -> f[0])
8
    .forEach(i -> System.out.print(i+" "));
9
10
11
12
```

Output:

1 3 5 7 9 11 13 15 17 19

31) How do you get last element of an array?

```
1
    import java.util.Arrays;
2
    import java.util.List;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
    List<String> listOfStrings = Arrays.asList("One", "Two", "Three", "Four", "Five", "Six");
7
8
    String lastElement = listOfStrings.stream().skip(listOfStrings.size() - 1).findFirst().get();
9
10
    System.out.println(lastElement);
11
12
13
14
```

Output:

Six

32) Find the age of a person in years if the birthday has given?

```
1
    import java.time.LocalDate;
2
    import java.time.temporal.ChronoUnit;
3
    public class Java8Code
4
5
    public static void main(String[] args)
6
7
    LocalDate birthDay = LocalDate.of(1985, 01, 23);
    LocalDate today = LocalDate.now();
8
9
    System.out.println(ChronoUnit.YEARS.between(birthDay, today));
10
11
12
13
```

Also Read: