Interview prospective programming questions

1. Write a program to find factorial of the given number. ?

```java
package com.core.all.interview.programmes;

public class FindFactorial {

    public int find(int no) {
        int fact = 1;
        for (int i = 1; i <= no; i++) {
            fact = fact * i;
        }
        return fact;
    }

    public static void main(String[] args) {
        System.out.println(new FindFactorial().find(5));
    }
}
```

2. Write a program to check whether the given number is even or odd.

```java
package com.core.all.interview.programmes;

public class EvenOddFinder {

    public String search(int no) {
        if (no % 2 == 0) {
            return "Given No " + no + " is even number";
        }
        return "Given No " + no + " is odd number";
    }

    public static void main(String[] args) {
        System.out.println(new EvenOddFinder().search(8));
    }
}
```

3. Write a program to swap two numbers using a temporary variable.

```java
package com.core.all.interview.programmes;

public class Swap2NoWithTemp {
    public void swap(int no1, int no2) {
        int temp = 0;
        System.out.println("Before swapping :" + "no1 is " + no1 + " no2 is " + no2);
        temp = no1;
        no1 = no2;
        no2 = temp;
        System.out.println("Before swapping :" + "no1 is " + no1 + " no2 is " + no2);
    }

    public static void main(String[] args) {
        new Swap2NoWithTemp().swap(4, 5);
    }
}
```

4. Write a program to swap two numbers without using a temporary variable.

```java
package com.core.all.interview.programmes;

public class Swap2NoWithoutTemp {

    public void swap(int no1, int no2) {
        System.out.println("Before swapping :" +"no1 is " + no1 + " no2 is " + no2);
        no1 = no1 + no2;
        no2 = no1 - no2;
        no1 = no1 - no2;
        System.out.println("After swapping :" + "no1 is " + no1 + " no2 is " + no2);
    }
    public static void main(String[] args) {
        new Swap2NoWithoutTemp().swap(10, 19);
    }
}
```

5. Write a program to swap two numbers using bitwise operators.

```java
package com.core.all.interview.programmes;

public class Swap2NoWithBitwiseOperator {
    public void swap(int x, int y) {
        System.out.println("Before swapping :" + "no1 is " + x + " no2 is " + y);
        x = x ^ y;
        y = x ^ y;
        x = x ^ y;
        System.out.println("After swapping :" + "no1 is " + x + " no2 is " + y);
    }

    public static void main(String[] args) {
        new Swap2NoWithBitwiseOperator().swap(90, 22);
    }
}
```

6. Write a program to find the greatest of three numbers.

```java
1  package com.core.all.interview.programmes;
2
3  public class FindGreatestNo {
4      int max = 0;
5⊖     public int find(int no1, int no2, int no3) {
6          if (no1 > no2 && no1>no3) {
7              return max = no1;
8          } else if (no2 > no3 && no2>no1) {
9              return max = no2;
10         } else {
11             return max = no3;
12
13         }
14     }
15⊖     public static void main(String[] args) {
16         System.out.println("Greatest no is :" + new FindGreatestNo().find(11, 9, 45));
17     }
18 }
```

7. Write a program to find the greatest among ten numbers.

```java
1 package com.core.all.interview.programmes;
2
3 import java.util.ArrayList;
7
8 public class LargestFrom10No {
9
0      public void find() {
1          int i = 1;
2          List<Integer> l = new ArrayList<>();
3          while (i <= 10) {
4              @SuppressWarnings("resource")
5              Scanner scn = new Scanner(System.in);
6              System.out.println("Enter No ");
7              int no = scn.nextInt();
8              l.add(no);
9              i++;
0          }
1          Collections.sort(l);
2          System.out.println("Largest No is :" + l.get(l.size() - 1));
3      }
4
5      public static void main(String[] args) {
6          new LargestFrom10No().find();
7      }
8 }
9
```

8. Write a program to check whether the given number is a prime.

```java
package com.core.all.interview.programmes;

public class PrimeNoChecker {

    public boolean search(int no) {
        for (int i = 2; i <= no / 2; i++) {
            if (no % i == 0) {
                return false;
            }
        }
        return true;
    }
}
```

9. Write a program to check whether the given number is a palindrome c number.

```java
package com.core.all.interview.programmes;

public class NumberpalindromeChecker {

    public boolean search(int no) {
        boolean ispalindrome = false;
        if (reverse(no) == no) {
            ispalindrome = true;
        }
        return ispalindrome;

    }

    public int reverse(int no) {
        int reverseNo = 0;
        while (no != 0) {
            reverseNo = (reverseNo * 10) + (no % 10);
            no = no / 10;
        }
        return reverseNo;
    }
}
```

10. Write a program to check whether the given string is a palindrome.

```java
package com.core.all.interview.programmes;

public class StringPalindromeChecker {

    public boolean search(String word) {
        boolean ispalindrome = false;
        String reverse = "";
        for (int i = word.length() - 1; i >= 0; i--) {
            reverse = reverse + word.charAt(i);
        }
        if (reverse.equals(word)) {
            ispalindrome = true;
        }
        return ispalindrome;
    }
}
```

11. Write a program to generate the Fibonacci series.

```java
package com.core.all.interview.programmes;

public class FibonacciSeries {

    static int no1 = 0;
    static int no2 = 1;
    static int no3;

    public static void findFibonacis(int count) {
        if (count > 0) {
            no3 = no1 + no2;
            no1 = no2;
            no2 = no3;
            System.out.print("-" + no3);
            findFibonacis(count - 1);

        }
    }

    public static void main(String[] args) {
        System.out.print(no1 + "" + no2);
        findFibonacis(8);
    }
}
```

12. Write a program to print "Hello World" without using semicolon anywhere in th

13. Write a program to print a semicolon without using a semicolon anywhere in the code.

```java
1  package com.core.all.interview.programmes;
2
3  public class PrintSemicolon {
4      public static void main(String[] args) {
5          System.out.println((char) 59);
6      }
7  }
8
```

14. Write a program to delete a specified line from a text file.

```java
1  package com.core.all.interview.programmes;
2
3  import java.io.BufferedReader;
7
8  public class DeleteSpecificLineFromFile {
9
10     public void delete(String fileName, int deleteLine) throws IOException {
11         int count = 0;
12         BufferedReader br = new BufferedReader(new FileReader(new File(fileName)));
13         String line;
14         while ((line = br.readLine()) != null) {
15             count++;
16             if (count == deleteLine) {
17                 line = line.replaceAll(line, "");
18             }
19             System.out.println(line);
20         }
21     }
22
23     public static void main(String[] args) throws IOException {
24         new DeleteSpecificLineFromFile().delete("src//file1.txt", 2);
25     }
26 }
27
```

15. Write a program to find the number of lines in a text file.

```java
1 package com.core.all.interview.programmes;
2
3 import java.io.BufferedReader;
7
8 public class CountTotalLineFromFile {
9     public static void main(String[] args) throws IOException {
10         BufferedReader br = new BufferedReader(new FileReader(new File("src//interview.txt")));
11         int count = 0;
12         while ((br.readLine()) != null) {
13             count++;
14         }
15         System.out.println("Total no of line is :" + count);
16     }
17 }
18
```

16. Write a program to display the multiplication table of a given number.

```java
1 package com.core.all.interview.programmes;
2
3 public class MultipicationTable {
4
5     public void getMulTable(int no){
6         for(int i=0;i<10;i++){
7             System.out.println(no+"*"+i+"="+(no*i));
8         }
9     }
10     public static void main(String[] args) {
11         new MultipicationTable().getMulTable(10);
12     }
13 }
```

17. WAP to find out the longest word in a string.

```java
package com.core.all.interview.programmes;

public class FindLongestWord {

    public void find(String sentence) {
        String[] word = sentence.split(" ");
        String big = word[0];
        for (int i = 1; i < word.length; i++) {
            if (word[i].length() > big.length()) {
                big = word[i];
            }
        }
        System.out.println("Longest word = " + big);

    }

    public static void main(String[] args) {
        new FindLongestWord().find("Count the Total Number of 7 comming between 1 to 100");
    }
}
```

18. WAP to print the triangle of letters in increasing order of lines..

```java
1  package com.core.all.interview.programmes;
2
3  public class TrianglePattern {
4      public static void main(String[] args) {
5          for (int i = 1; i <= 10; i++) {
6              for (int j = 1; j <= i; j++) {
7                  System.out.print(j);
8              }
9              System.out.println();
10         }
11     }
12 }
13
```

19. WAP to print 'xay' In place of every 'a 'in a string

```java
1  package com.core.all.interview.programmes;
2
3  public class ValueReplacer {
4      public String appender(String word) {
5          String nextWord = "";
6          nextWord = word.replace("a", "xay");
7          return nextWord;
8      }
9
10     public static void main(String[] args) {
11         System.out.println(new ValueReplacer().appender("basanta"));
12     }
13 }
14
```

20. Count the Total Number of 7 coming between 1 to 100.

```java
1  package com.core.all.interview.programmes;
2
3  public class FindNoOf7 {
4
5      public static int count7(int startDigit, int endDigit) {
6          int count = 0;
7          for (int i = startDigit; i <= endDigit; i++) {
8              int j = i;
9              while (j > 0) {
10                 if (j % 10 == 7)
11                     count++;
12                 j = j / 10;
13             }
14         }
15         return count;
16     }
17
18     public static void main(String[] args) {
19         System.out.println("No of seven present in between 1 to 100 is: " + count7(1, 100));
20     }
21 }
```

21. WAP to find out if a given number is a power series of 2 or not?

```java
1 package com.core.all.interview.programmes;
2
3 public class CheckPowerOf2 {
4     |
5     public boolean search(int no) {
6         boolean isPower = false;
7         int temp = no;
8         while (temp >= 2) {
9             if (temp % 2 == 0) {
10                isPower = true;
11            } else {
12                isPower = false;
13                break;
14            }
15            temp /= 2;
16        }
17        return isPower;
18    }
19
20    public static void main(String[] args) {
21        System.out.println("Is power of 2 :" + new CheckPowerOf2().search(9));
22    }
23 }
24
```

22. WAP to check Array Equality without using predefined method.

```java
package com.array.prog;

import java.util.Arrays;

public class ArrayEquality {

    // Approach : 1(By using Predefined methods)

    public boolean equal(int[] i1, int[] i2) {
        boolean isEqual = false;

        Arrays.sort(i1);
        Arrays.sort(i2);

        if (Arrays.equals(i1, i2)) {
            isEqual = true;
        } else {
            isEqual = false;
        }
        return isEqual;
    }

    // Approach : 2(without using Predefined methods)
    public boolean equalArray(int[] i1, int[] i2) {
        boolean isEqual = false;
        for (int i = 0; i <= i1.length - 1; i++) {
            for (int j = 0; j <= i2.length - 1; j++) {
                if (i1[i] == i2[j]) {
                    isEqual = true;
                }
            }
        }
        return isEqual;
    }

    public static void main(String[] args) {
        System.out.println("is Equal :"
                + new ArrayEquality().equal(new int[] { 1, 2, 3, 4 },
                        new int[] { 4, 3, 2, 1 }));

        System.out.println("is Equal :"
```

```
                              + new ArrayEquality().equalArray(new int[] { 1,
2, 3, 4 },
                                    new int[] { 1, 2, 3, 4 }));
        }
}
```

23. WAP to find duplicate from Array?

```java
package com.array.prog;

import java.util.Set;

public class FindDuplicateElementFromArray {

    public void find(int[] input) {
        Set<Integer> s = new TreeSet<>();
        int duplicate = 0;
        for (int i = 0; i <= input.length - 1; i++) {
            for (int j = i + 1; j <= input.length - 1; j++) {
                if (input[i] == input[j]) {
                    duplicate = input[j];
                    s.add(duplicate);
                }
            }
        }
        System.out.println("Duplicate Elements Are :" + s.toString());
    }

    public static void main(String[] args) {
        new FindDuplicateElementFromArray()
                .find(new int[] { 1, 2, 3, 4, 1, 2 });
    }
}
```

24. WAP to print second largest number of given Array?

```java
package com.array.prog;

import java.util.Arrays;

public class FindSecondLargestNo {

    public int find(int[] input) {
        Arrays.sort(input);
        return input[input.length-2];
    }
}
```

25. WAP to find sum of no forgiven number from Array?

```java
1 package com.array.prog;
2
3⊕import java.util.HashMap;⬚
5
6 public class PrintArraySum {
7
8⊖    public void pair(int[] input, int no) {
9            Map<Integer, Integer> m = new HashMap<>();
10           for (int i = 0; i <= input.length - 1; i++) {
11               if (m.containsKey(input[i])) {
12                   System.out.println(input[i] + " , " + m.get(input[i]));
13               } else {
14                   m.put(no - input[i], input[i]);
15
16               }
17           }
18       }
19⊖    public static void main(String[] args) {
20           new PrintArraySum().pair(new int[] { 2, 45, 7, 3, 5, 1, 8, 9 }, 8);
21       }
22 }
```

26. WAP to find duplicate from String?

By using Collection:

```java
public class FindDuplicateFromString {

    public void find(String word) {
        List<Character> list = new ArrayList<>();
        char[] ch = word.toCharArray();
        for (char c : ch) {
            list.add(c);
        }
        Set<Character> s = new TreeSet<>(list);
        for (char c1 : s) {
            if (Collections.frequency(list, c1) > 1) {
                System.out.println(c1);
            }
        }
    }
}
```

By using String method:

```java
public class FindDuplicateFromString {

    public void find(String word) {
        for (int i = 0; i <= word.length() - 1; i++) {
            for (int j = i + 1; j <= word.length() - 1; j++) {
                if (word.charAt(i) == word.charAt(j)) {
                    System.out.println(word.charAt(j));
                }
            }
        }
    }
}
```

27. WAP to find number of occurrence of character from given String?

```java
public class FindCharOccurance {

    // Approach : 1
    public void count(String word) {
        List<Character> l = new ArrayList<>();
        char[] ch = word.toCharArray();
        for (char c : ch) {
            l.add(c);
        }
        Set<Character> s = new TreeSet<>(l);
        for (char c1 : s) {
            System.out.println(c1 + " : " + Collections.frequency(l, c1));
        }
    }

    // Approach :2

    public Map<String, Integer> count2(String word) {
        Map<String, Integer> m = new TreeMap<>();
        String[] data = word.split("");
        for (String s : data) {
            if (m.containsKey(s)) {
                m.put(s, m.get(s) + 1);
            }
            m.put(s, 1);
        }
        return m;
    }
}
```

28. WAP to remove White Space from given Sentence?

```java
1  package com.string.prog;
2
3  public class RemoveWhiteSpace {
4
5      public String remove(String word) {
6          word = word.replace(" ", "");
7          return word;
8      }
```

29. WAP to check string anagram?

```java
package com.string.prog;

import java.util.Arrays;

public class StringAnagram {

    public static boolean isAnagram(String word1, String word2) {
        boolean flag = false;

        // Remove Space fst
        String data1 = word1.replaceAll("\\s", "");
        String data2 = word2.replaceAll("\\s", "");

        if (data1.length() != data2.length()) {
            flag = false;
        } else {
            char[] ch1 = data1.toLowerCase().toCharArray();
            char[] ch2 = data2.toLowerCase().toCharArray();
            Arrays.sort(ch1);
            Arrays.sort(ch2);
            boolean status = Arrays.equals(ch1, ch2);
            flag = status;
        }
        return flag;
    }

    public static void main(String[] args) {
        boolean result = isAnagram("dugu", "G udu");
        System.out.println(result);
```

30. WAP to reverse string?

```java
package com.string.prog;

import java.util.ArrayList;

public class ReverseString {

    // Approach : 1
    public String reverse1(String word) {
        String reverse = "";
        for (int i = word.length() - 1; i >= 0; i--) {
            reverse += word.charAt(i);
        }
        return reverse;
    }

    // Approach :2
    public StringBuffer reverse2(String word) {
        return new StringBuffer(word).reverse();
    }

    // Approach :3
    public void reverse3(String word) {
        char[] ch = word.toCharArray();
        for (int i = ch.length - 1; i >= 0; i--) {
            System.out.print(ch[i]);
        }
    }
}

    // Approach: 4
    public void reverse4(String word) {
        List<Character> list = new ArrayList<>();
        char[] ch = word.toCharArray();
        for (char c : ch) {
            list.add(c);
        }
        Collections.reverse(list);
        System.out.print(list);
    }
```

31. WAP to find Armstrong number?

```java
1  package com.misllanious.prog;
2
3  public class ArmstrongNo {
4
5      public boolean find(int no) {
6          boolean isArmstrong = false;
7          int sum = 0;
8          int temp = 0;
9          int value = no;
0          while (no != 0) {
1              temp = no % 10;
2              no = no / 10;
3              sum = sum + (temp * temp * temp);
4          }
5          if (sum == value) {
6              isArmstrong = true;
7          }
8          return isArmstrong;
9      }
0
10     public static void main(String[] args) {
2          System.out.println("Is Armstrong :" + new ArmstrongNo().find(153));
3      }
4  }
```

32. WAP to find sum of digit?

```java
package com.misllanious.prog;

public class SumOfAllDigit {

    public int add(int no) {
        int sum = 0;
        while (no != 0) {
            int getNo = no % 10;
            no = no / 10;
            sum = sum + getNo;
        }
        return sum;
    }
}
```