JAVA Question Bank Solution

Practical

1) Write a java program to find the factorial of the number.
   Ans.

```
class pm {
    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);
        System.out.println("enter a number :");
        int num = sc.nextInt();

        int fact = 1;
        for (int i = 1; i <= num; i++) {
            fact = fact * i;
        }
        System.out.println("factorial of " + num + " is :" + fact);
       }
      }
    }
}
```

2) Write a java program to display Fibonacci series .
   Ans.

```
class pm {
    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int a = 0;
        int b = 1;
        System.out.print(a + " ");

        if (n > 1) {
            for (int i = 2; i <= n; i++) {
                System.out.print(b + " ");
                int temp = b;
                b = a + b;
                a = temp;
            }
            System.out.println();
        }
     }
```

```
}
```

3) Write a java program to reverse the given string.
   Ans.

```
class pm {
    public static void main(String args[]) {

        StringBuilder sb = new StringBuilder("hello");
        sb.reverse();
        System.out.println(sb.toString());
      }
  }
```

4) Write a java program to check the given string is palindrome or not
   Ans.

```
class pm {
    public static void main(String args[]) {

        String string = "Kayak";
        boolean flag = true;

        // Converts the given string into lowercase
        string = string.toLowerCase();

        // Iterate the string forward and backward, compare one character at a
time
        // till middle of the string is reached
        for (int i = 0; i < string.length() / 2; i++) {
            if (string.charAt(i) != string.charAt(string.length() - i - 1)) {
                flag = false;
                break;
            }
        }
        if (flag)
            System.out.println("Given string is palindrome");
        else
            System.out.println("Given string is not a palindrome");
       }
  }
```

5) Write a java program to print the prime numbers up to nth number

Ans.

```
class pm {
    public static void main(String args[]) {

        // constructor of the Scanner class
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the value of n to compute the nth prime
number: ");
        // reading an integer from the user
        int n = sc.nextInt();
        int num = 1, count = 0, i;
        while (count < n) {
            num = num + 1;
            for (i = 2; i <= num; i++) {
                // determines the modulo and compare it with 0
                if (num % i == 0) {
                    // breaks the loop if the above condition returns true
                    break;
                }
            }
            if (i == num) {
                // increments the count variable by 1 if the number is prime
                count = count + 1;
            }
        }
        // prints the nth prime number
        System.out.println("The " + n + "th prime number is: " + num);

    }
}
```

6) Write a java program to create user defined package.

Ans.

7) Write a java program to represent Abstract class with example.

Ans.

8) Write a java program to implement Interface using extends 10 keyword

Ans.

9) Write a java program to find the if the arrays are equal
Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array1 = { 1, 2, 3, 4, 5 };
        int[] array2 = { 1, 2, 3, 4, 5 };

        boolean areEqual = Arrays.equals(array1, array2);
        if (areEqual) {
            System.out.println("the arrays are equal.");
        } else {
            System.out.println("the arrays are not equal,");
        }
    }
}
```

10) Write a java program to find maximum number in array.
Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 5, 10, 3, 8, 15 };
        int maxnum = array[0];
        for (int num : array) {
            if (num > maxnum) {
                maxnum = num;
            }
        }
        System.out.println("the maximum number in the array is: " + maxnum);
    }
}
```

11) Write a java program to find the Kth Largest and Smallest Element in an Array

Ans.

```
public class pm {
    public static void main(String[] args) {
        int[] array = { 12, 5, 8, 9, 10, 3, 20 };
        int k = 3; // Change k to the desired value

        int kthSmallest = findKthSmallest(array, k);
        int kthLargest = findKthLargest(array, k);

        System.out.println("The " + k + "th smallest element is: " +
kthSmallest);
        System.out.println("The " + k + "th largest element is: " +
kthLargest);
    }

    private static int findKthSmallest(int[] arr, int k) {
        Arrays.sort(arr);
        return arr[k - 1];
    }

    private static int findKthLargest(int[] arr, int k) {
        Arrays.sort(arr);
        return arr[arr.length - k];
    }
}
```

12) Write a java program to find Compute Sum and Average of Array Elements

Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 10, 5, 8, 15, 7 };

        int sum = 0;
        for (int num : array) {
            sum += num;
        }
        double average = (double) sum / array.length;

        System.out.println("sum of array elements : " + sum);
        System.out.println("average of array elements : " + average);
```

```
    }
}
```

13) Write a java program Sum of Array Elements

Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 5, 10, 15, 20, 25 };

        int sum = 0;
        for (int num : array) {
            sum += num;
        }

        System.out.println("sum of array elements : " + sum);

    }
}
```

14) Write a java program Using for-each Loop

Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 5, 10, 15, 20, 25 };

        int sum = 0;
        for (int num : array) {
            sum += num;
        }

        System.out.println("sum of array elements : " + sum);

    }
}
```

15) Write a java program Sum of Positive Numbers Only

Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 5, -10, 15, -20, 25 };

        int sum = 0;
        for (int num : array) {
            if (num > 0) {
                sum += num;
            }
        }

        System.out.println("sum of positive elements : " + sum);

    }
}
```

16) Write a Java program to find the second largest element in an array.

Ans.

```
class pm {
    public static void main(String args[]) {

        int[] array = { 10, 5, 8, 15, 7 };

        int firstLargest = Integer.MIN_VALUE;
        int secondLargest = Integer.MIN_VALUE;

        for (int num : array) {
            if (num > firstLargest) {
                secondLargest = firstLargest;
                firstLargest = num;
            } else if (num > secondLargest && num < firstLargest) {
                secondLargest = num;
            }
        }
        System.out.println("the second-largest element is : " +
secondLargest);
    }
}
```

17) Write a Java program Constructors Overloading in Java

Ans.

```
public class ConstructorOverloadingExample {
    private int value;

    public ConstructorOverloadingExample() {
        this.value = 0;
    }

    public ConstructorOverloadingExample(int value) {
        this.value = value;
    }

    public static void main(String[] args) {
        ConstructorOverloadingExample obj1 = new
ConstructorOverloadingExample();
        ConstructorOverloadingExample obj2 = new
ConstructorOverloadingExample(5);

        System.out.println("Value from obj1: " + obj1.value);
        System.out.println("Value from obj2: " + obj2.value);
    }
}
```

18) Write a Java program thread Synchronization.

Ans.

19) Write a Java program thread sleep(), join() method.

Ans.

20) Write a Java Program to print multiple threads.

Ans.