

StringPrograms.java + 42jq24asy NEW JAVA RUN

```
1 public class StringPrograms {  
2  
3     public static void main(String[] args) {  
4         String str = "123";  
5  
6         System.out.println(reverse(str));  
7     }  
8  
9     public static String reverse(String in) {  
10        if (in == null)  
11            throw new IllegalArgumentException("Null is not valid input");  
12  
13        StringBuilder out = new StringBuilder();  
14  
15        char[] chars = in.toCharArray();  
16  
17        for (int i = chars.length - 1; i >= 0; i--)  
18            out.append(chars[i]);  
19  
20        return out.toString();  
21    }  
22  
23 }
```

STDIN

Output:

321

```
1 public class SwapNumbers {  
2  
3 public static void main(String[] args) {  
4     int a = 10;  
5     int b = 20;  
6  
7     System.out.println("a is " + a + " and b is " + b);  
8  
9     a = a + b;  
10    b = a - b;  
11    a = a - b;  
12  
13    System.out.println("After swapping, a is " + a + " and b is " + b);  
14 }  
15  
16 }
```

STDIN

Output:

a is 10 and b is 20  
After swapping, a is 20 and b is 10

```
1 import java.util.*;
2
3 public class Main {
4     public static void main(String[] args) {
5         System.out.println("Hello, mritsha!");
6     }
7 }
```

STDIN

Output:

Hello, mritsha!



StringContainsVowels.java



42jq2wmd7

NEW

JAVA

RUN



```
1 public class StringContainsVowels {  
2  
3     public static void main(String[] args) {  
4         System.out.println(stringContainsVowels("mritsha")); // true  
5         System.out.println(stringContainsVowels("murali")); // false  
6     }  
7  
8     public static boolean stringContainsVowels(String input) {  
9         return input.toLowerCase().matches(".*[aeiou].*");  
10    }  
11  
12 }
```

STDIN

Output:

true  
true



```
1 public class PrimeNumberCheck {
2
3     public static void main(String[] args) {
4         System.out.println(isPrime(19)); // true
5         System.out.println(isPrime(49)); // false
6     }
7
8     public static boolean isPrime(int n) {
9         if (n == 0 || n == 1) {
10             return false;
11         }
12         if (n == 2) {
13             return true;
14         }
15         for (int i = 2; i <= n / 2; i++) {
16             if (n % i == 0) {
17                 return false;
18             }
19         }
20
21         return true;
22     }
23 }
24
25
```

STDIN

Output:

true  
false



```
1 public class PrintFibonacci {
2
3     public static void printFibonacciSequence(int count) {
4         int a = 0;
5         int b = 1;
6         int c = 1;
7
8         for (int i = 1; i <= count; i++) {
9             System.out.print(a + ", ");
10
11             a = b;
12             b = c;
13             c = a + b;
14         }
15     }
16
17     public static void main(String[] args) {
18         printFibonacciSequence(10);
19     }
20
21 }
22
```

STDIN

Output:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34,

```
1 import java.util.Arrays;
2 import java.util.HashSet;
3 import java.util.Set;
4
5 public class ArraySameElements {
6
7     public static void main(String[] args) {
8         Integer[] a1 = {1,2,3,2,1};
9         Integer[] a2 = {1,2,3};
10        Integer[] a3 = {1,2,3,4};
11
12        System.out.println(sameElements(a1, a2));
13        System.out.println(sameElements(a1, a3));
14    }
15    static boolean sameElements(Object[] array1, Object[] array2) {
16        Set<Object> uniqueElements1 = new HashSet<>(Arrays.asList(array1));
17        Set<Object> uniqueElements2 = new HashSet<>(Arrays.asList(array2));
18        if (uniqueElements1.size() != uniqueElements2.size()) return false;
19
20        for (Object obj : uniqueElements1) {
21            if (!uniqueElements2.contains(obj)) return false;
22        }
23
24        return true;
25    }
26
27 }
```

STDIN

Output:

true  
false

```
1 public class MergeSort {
2     public static void main(String[] args) {
3         int[] arr = { 70, 50, 30, 10, 20, 40, 60 };
4         int[] merged = mergeSort(arr, 0, arr.length - 1);
5         for (int val : merged) {
6             System.out.print(val + " ");
7         }
8     }
9     public static int[] mergeTwoSortedArrays(int[] one, int[] two) {
10        int[] sorted = new int[one.length + two.length];
11        int i = 0;
12        int j = 0;
13        int k = 0;
14        while (i < one.length && j < two.length) {
15            if (one[i] < two[j]) {
16                sorted[k] = one[i];
17                k++;
18                i++;
19            } else {
20                sorted[k] = two[j];
21                k++;
22                j++;
23            }
24        }
25        if (i == one.length) {
26            while (j < two.length) {
27                sorted[k] = two[j];
28                k++;
29                j++;
30            }
31        }
32        if (j == two.length) {
33            while (i < one.length) {
34                sorted[k] = one[i];
35                k++;
36                i++;
37            }
38        }
39        return sorted;
40    }
41    public static int[] mergeSort(int[] arr, int lo, int hi) {
42        if (lo == hi) {
43            int[] hr = new int[1];
```

STDIN

Input for the program (Optional)

Output:

10 20 30 40 50 60 70



```
1 public class Armstrong {
2
3     public static void main(String[] args) {
4
5         int number = 1634, originalNumber, remainder, result = 0, n = 0;
6
7         originalNumber = number;
8
9         for (;originalNumber != 0; originalNumber /= 10, ++n);
10
11        originalNumber = number;
12
13        for (;originalNumber != 0; originalNumber /= 10)
14        {
15            remainder = originalNumber % 10;
16            result += Math.pow(remainder, n);
17        }
18
19        if(result == number)
20            System.out.println(number + " is an Armstrong number.");
21        else
22            System.out.println(number + " is not an Armstrong number.");
23    }
24 }
25
```

STDIN

Output:

1634 is an Armstrong number.

```
1 public class Armstrong {
2
3     public static void main(String[] args) {
4
5         int number = 371, originalNumber, remainder, result = 0;
6
7         originalNumber = number;
8
9         while (originalNumber != 0)
10        {
11            remainder = originalNumber % 10;
12            result += Math.pow(remainder, 3);
13            originalNumber /= 10;
14        }
15
16        if(result == number)
17            System.out.println(number + " is an Armstrong number.");
18        else
19            System.out.println(number + " is not an Armstrong number.");
20    }
21 }
22
```

STDIN

Output:

371 is an Armstrong number.