```
NonPrimeNumbersRange:
   26-May-2022
   *****
                      *******
   Test1:
   package com.basicjava;
 6
   import java.util.Scanner;
 8
   public class NonPrimeNumbersRange {
10
11
     public static void main(String[] args) {
12
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the first Number: ");
13
        int a = scan.nextInt();
14
        System.out.println("Enter the Second Number: ");
15
        int b = scan.nextInt();
16
       System.out.println("The range between the numbers are: ");
17
18
19
       for (int i = a; i \le b; i++) {
20
          boolean isPrimeNo = true;
21
22
23
         for (int j = 2; j <= Math.sqrt(i); j++) {
24
25
            if (i % j == 0)
26
              isPrimeNo = false;
27
28
          }
29
30
         if (isPrimeNo)
            System.out.println("This is a prime no: " + i);
31
32
         else {
33
34
          }
35
```

```
36
37
38
39
40
41
42
43
   Output:
44
45 Enter the first Number:
46 10
   Enter the Second Number:
48 20
49 The range between the numbers are:
50 This is a prime no: 11
51 This is a prime no: 13
52 This is a prime no: 17
   This is a prime no: 19
55 Test1:
                  AdditionOfTwoNumbers:
   *****
                  ********
57
   package com.basicjava;
58 import java.util.Scanner;
   public class AddTwoNumbers {
59
60
     public static void main(String[] args)
61
62
63
       Scanner scan=new Scanner(System.in);
       System.out.println("Enter the FirstNumber: ");
64
       int val1=scan.nextInt();
65
       System.out.println("Enter the secondNumber: ");
66
67
       int val2=scan.nextInt();
68
       String strVal1=String.valueOf(val1);
       String strVal2=String.valueOf(val2);
69
       int size1=strVal1.length();
70
```

```
71
         int size2=strVal2.length();
 72
         if(size1>size2)
 73
 74
           String res=strVal1.substring(0, size1-1);
           System.out.println("After Removing a last Digit: " +res);
 75
           int c=Integer.parseInt(res);
 76
 77
           int d=Integer.parseInt(strVal2);
 78
           int e=c+d:
 79
           System.out.println("Addition Result: "+e);
 80
         else if(size1<size2)
 81
 82
 83
           String res=strVal2.substring(0, size2-1);
           System.out.println("After Removing a last Digit: "+res);
 84
           int c=Integer.parseInt(res);
 85
 86
           int d=Integer.parseInt(strVal1);
           int e=c+d:
 87
           System.out.println("Addition Result: "+e);
 88
 89
         }
 90
         else
 91
 92
           int c=Integer.parseInt(strVal1);
           int d=Integer.parseInt(strVal2);
 93
 94
           int e=c+d:
 95
           System.out.println("Addition Result: "+e);
 96
         }
 97
 98
 99
    }
100 output:
101 -----
102 Enter the FirstNumber:
103 1234
104 Enter the secondNumber:
105 135
```

```
106 After Removing a last Digit: 123
107 Addition Result: 258
108 -----
                   AddOrSubtract
109 test1:
110 *****
                   ******
111 Statement:
112 -----
113
      #. Write a program to add or subtract. Reverse the first number and check the second
114 number is prime, if prime add with the reversed number else subtract with the
115 reversed number
116
    package com.basicjava;
117
118 import java.util.Scanner:
119 public class AddOrSubtract {
120
121
      public static void main(String[] args) {
         Scanner scan=new Scanner (System.in):
122
         System.out.println("Enter the first no: ");
123
124
         int a=scan.nextInt();
125
         String input=String.valueOf(a):
         StringBuilder sb=new StringBuilder(input):
126
127
         String rev=sb.reverse().toString();
         int revNumeric=Integer.parseInt(rev);
128
         System.out.println("The reversed number is: " +revNumeric);
129
130
         System.out.println("Enter the second input: ");
131
         int sec=scan.nextInt();
132
133
         boolean isPrime=true:
        for(int i=2;i<sec:i++)
134
135
136
           if(sec\%i==0)
137
138
            System.out.println(sec +" is not a prime number");
            System.out.println(revNumeric-sec);
139
            isPrime=false:
140
```

```
141
            break;
142
143
144
145
        if(isPrime)
146
          System.out.println(sec +" is a prime number");
147
148
          System.out.println(revNumeric+sec);
149
150
151 }
152
153
154 Output:
155 -----
156 Enter the first no:
157 123
158 The reversed number is: 321
159 Enter the second input:
160 7
161 7 is a prime number
162 328
163
164 123Enter the first no:
165
166 The reversed number is: 321
167 Enter the second input:
168 10
169 10 is not a prime number
170 311
                 PositiveOrNegative
172 Test2:
                  ******
    *****
173
    import java.io.*;
174
175 import java.util.*;
```

```
176
177
    public class Solution {
178
179
      public static void main(String[] args) {
180
        Scanner scan=new Scanner(System.in);
        int num=scan.nextInt();
181
182
        if(num>=0)
183
          System.out.println("Positive");
184
185
186
        else
187
          System.out.println("Negative");
188
189 }
190 output:
191 -----
192 5
193 positive
194 -3
195 negative
196 -----
197 Test2:
                   SumOfNaturalNumbers
198 ******
                   *******
199 import java.util.Scanner;
200 public class SumOfNaturalNumber {
      public static void main(String args[])
201
202
203
        Scanner scan=new Scanner(System.in);
204
        int a=scan.nextInt();
        int sum=(a*(a+1))/2;
205
        System.out.println(sum);
206
207
208
209
210 }
```

```
211 output:
212 -----
213 input: 5
214 output: 15
215 -----
216 Test 3:
217 *******
218 #.EvenNumberCount
219 #.ReverseAnarray
220 #.DeleteAnElement...usingContinue;
221 #.SearchAnElement
222 #.MinimumNumber
223 -----
224 Test4: HalfReverseAndAdd:-
225 ******
                 *******
226 Statement:- Need to write a program to reverse the half of the elements from an array
                 and add the even index's elements and print it.
227 -----
228
229 package HacerRankProblems;
230 import java.util.Scanner;
231 public class HalfReverseAndAdd {
232
      public static void main(String[] args) {
233
        Scanner scan = new Scanner(System.in);
234
        System.out.println("Enter the Size: ");
235
        int size = scan.nextInt():
        int haSize = size % 2 == 0 ? (size / 2) : (size / 2) + 1;
236
237
        System.out.println(haSize);
238
        int a[] = new int[size];
239
        int b[] = new int[size];
240
        int sum = 0:
241
        for (int i = 0; i < size; i++) {
242
          a[i] = scan.nextInt():
243
        int i = 0:
244
245
        for (int i = 0; i \le haSize - 1; i++) {
```

```
246
           b[j] = a[i];
247
           j++;
248
249
         for (int i = size - 1; i >= haSize; i--) {
250
           b[j] = a[i];
251
           j++;
252
253
254
         for(int i=0;i<size;i++)</pre>
255
256
           if(i%2!=0)
257
258
             sum=sum+b[i];
259
260
261
262
         for(int i=0;i<size;i++)</pre>
263
264
           System.out.print(b[i] +" ");
265
266
267
         System.out.println();
         System.out.println(sum);
268
269
270
271
272 }
273
     output:
    *****
274
275
     Input Format
276 -----
277 7
278 1234567
     Output Format
279
280
```

```
281 1234765
282 12
283 Here the second half is reveresed
284
285
    Sample Input 0
286 -----
287 6
288 765432
289 Sample Output 0
290 -----
291 765234
292 12
293
294 Test4:
                  Reverse first and second half
295 ******
                  **********
296 package HacerRankProblems;
297
    import java.util.Scanner;
298
299
300
    public class HalfReverseAndAdd {
301
302
      public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
303
        System.out.println("Enter the Size: ");
304
305
        int size = scan.nextInt();
        int haSize = size / 2;
306
        System.out.println(haSize);
307
308
        int a[] = new int[size];
309
        int b[] = new int[size];
        int sum = 0:
310
        for (int i = 0; i < size; i++) {
311
          a[i] = scan.nextInt();
312
313
314
315
        int j = 0;
```

```
316
317
          if (size % 2 == 0) {
318
            for (int i = haSize - 1; i \ge 0; i--) {
319
              b[j] = a[i];
320
              j++;
321
322
            for (int i = size - 1; i >= haSize; i--) {
323
              b[j] = a[i];
324
              j++;
325
326
          } else {
327
328
            for (int i = haSize - 1; i \ge 0; i--) {
329
              b[j] = a[i];
330
              j++;
331
            }
332
333
            b[j] = a[haSize];
334
            j++;
335
            for (int i = size - 1; i > haSize; i--) {
336
              b[i] = a[i];
337
              j++;
338
            }
339
340
          for (int i = 0; i < size; i++) {
341
            System.out.print(b[i] + " ");
342
343
344
          }
345
346
347
348 }
349 OutPut:-
350
```

```
Sample Input 0
351
352 -----
353 6
354 123456
355 Sample Output 0
356 -----
357 321654
358
359 Test6: Print without Duplication
360 ******
                 *********
    Solving this problem by using LinkedHashSet:
361
    ****************
362
363
    import java.io.*;
    import java.util.*;
364
365
366
    public class Solution {
367
368
      public static void main(String[] args) {
369
      LinkedHashSet <Integer > Ihs=new LinkedHashSet <Integer > ();
370
        Scanner scan=new Scanner(System.in);
        int size=scan.nextInt();
371
372
       for(int i=0;i<size;i++)
373
374
         lhs.add(scan.nextInt());
375
        for(int x: lhs)
376
377
378
         System.out.print(x +" ");
379
380
381
382 Sample Input 0
383 -----
384 7
385 2265267
```

```
Sample Output 0
386
387
388 2657
389
390
    Test7:
                 CountThe DistinctElement:
     *****
                 **********
391
392
393
    package HacerRankProblems;
394 import java.util.Scanner;
395 import java.util.ArrayList;
396 import java.util.Arrays;
    import java.util.HashSet;
397
    import java.util.List:
398
399
     public class RemovingAllDuploicatesNumber {
400
401
402
       public static void main(String[] args) {
         Scanner scan=new Scanner (System.in);
403
404
         System.out.println("Enter the size: ");
405
         int size=scan.nextInt():
         List<Integer> inputList = new ArrayList<Integer>():
406
407
         for(int i=0;i<size;i++)</pre>
408
409
           inputList.add(scan.nextInt());
410
         HashSet<Integer> hs = new HashSet<Integer>();
411
         HashSet<Integer> duplicateValues = new HashSet<Integer>();
412
413
         for (int dupNum : inputList) {
414
           if (!(hs.add(dupNum))) {
415
416
             duplicateValues.add(dupNum);
417
418
         System.out.println("Collected Duplicated numbers are: "+duplicateValues);
419
         inputList.removeAll(duplicateValues);
420
```

```
int size1=inputList.size();
421
422
        System.out.println(size1);
423
424
425
426 }
427
    Sample Input 0
428
429 6
430 123423
431 Sample Output 0
432 -----
433 2
434 ---
435 Test7:
                Replace 0's with 1 and 1's with 0's
436 ******
                 **********
    package com.basicjava;
437
438
439
    import java.util.ArrayList;
440
    import java.util.Scanner;
441
442 public class Replacing0sAnd1s {
443
444
      public static void main(String[] args) {
445
        Scanner scan=new Scanner(System.in);
446
        System.out.println("Enter the number: ");
        String a=scan.next();
447
448
        char b[]=a.toCharArray();
449
        ArrayList<Character> al=new ArrayList<Character>();
        for(char c : b)
450
451
          if(c=='0')
452
453
            al.add('1');
454
455
```

```
456
          else
457
458
            al.add('0');
459
460
        al.forEach(System.out::print);
461
462
463
464
465 output:
466 -----
467 Sample Input 0
468 -----
469 101010
470 Sample Output 0
471
472 010101
473 -----
474 test7:-
                    Prime or not
    *****
                    *****
475
476
477
    package HacerRankProblems;
478 import java.util.Scanner;
    class PrimeCheck
479
480 {
      void displayPrime(int num)
481
482
483
        int flag=0;
        for(int i=2;i<Math.sqrt(num);i++)</pre>
484
485
          if(num%i==0)
486
487
488
            System.out.println("Not a Prime");
            flag=1;
489
490
            break;
```

```
491
492
        if(flag==0)
493
494
495
          System.out.println("Prime Number");
496
497
498
499 }
    public class Test1PrimeOrNot {
500
501
502
      public static void main(String[] args) {
        Scanner scan=new Scanner(System.in);
503
        System.out.println("Enter the number: ");
504
        int num=scan.nextInt();
505
        PrimeCheck pc=new PrimeCheck();
506
        pc.displayPrime(num);
507
508
509
510
511
512 }
513 output:--
515 11
516 not prime
517 10
518 prime
519
520 Test8:
                RemoveAllThe DuplicatesFromString
521
    *****
                ************
522
    package com.basicjava;
523
524
    import java.util.HashSet;
525
```

```
public class RemoveAllDuplicate {
527
528
       public static void main(String[] args) {
529
         String input="monoonabc3";
530
         char b[]=input.toCharArray();
         HashSet <Character> hs= new HashSet <Character>();
531
         StringBuilder sb=new StringBuilder();
532
533
        for(char c:b)
534
535
          if(!(hs.add(c)))
536
537
            sb.append(c +"|");
538
539
            continue;
540
541
         System.out.println("duplicates: "+sb);
542
         String res=input.replaceAll(sb.toString(), "");
543
544
         System.out.println("After removal of Duplicate: "+res);
         System.out.println("The First Non Repeating Chacter in the string is: "+res.charAt(0));
545
546
547
      }
548
549 }
550
551
     output:-
    *****
552
553 duplicates: o|o|n|
554 After removal of Duplicate: mabc3
555 The First Non Repeating Chacter in the string is: m
556
557
558 Test8:-
                FirstNonRepeatingCharacter:-
                 *********
559
560 Above program use for this problem:
```

```
561
562 System.out.println("The First Non Repeating Chacter in the string is: "+res.charAt(0));
563 The First Non Repeating Chacter in the string is: m
564
                      MaximumOccuringCharacter:-
565 Test8:-
    *****
                      **********
566
567 #.Write an efficient code to find maximum occurring character in the input string
568 package com.mukesh.wipro.assignments;
569 import java.util.Scanner;
570 public class Arr7 {
      public static void main(String[] args) {
571
572
        Scanner scan=new Scanner(System.in);
        String a=scan.next();
573
        char b[]=a.toCharArray();
574
        int size=a.length();
575
        for(int i=0;i<size;i++)</pre>
576
577
          for(int j=i+1;j<size;j++)
578
579
            if(b[i]==b[j])
580
581
              System.out.println(b[j]);
582
583
              break;
584
585
586
587
588
589 }
590 output:-
591
592 Input Format
593 -----
594 test
595 Output Format
```

```
596
597 t
598 Sample Input 0
599 -----
600 java
601 Sample Output 0
602 -----
603 a
604
605 Test9:- FactorialOfNumber:-
    *****
                  ******
606
607
    package com.basicjava;
608 import java.util.Scanner;
609 public class FactorialOfNumber {
      public static void main(String args[])
610
611
612
        Scanner scan = new Scanner (System.in);
613
        int a:
614
        int fact=1;
       System.out.println("enter the number:");
615
        a=scan.nextInt():
616
       System.out.println("the factorial of a given number is:");
617
        for(int i=1;i<=a;i++)
618
619
620
          fact=fact*i:
621
622
        System.out.println(fact);
623
        scan.close();
624
625
626
627
                 MergeTwoArrays:-
628 Test9:-
629 ******
                 *****
630 #.I can solve this problem efficently by using
```

```
TreeSet Collection Interface:
632
633
    Statement:
634
635
     the task is to get the two arrays and merge the two arrays
    futher print the merged array in ascending format.
637
638 package HacerRankProblems;
639 import java.util.TreeSet;
    import java.util.Arrays;
640
    import java.util.Scanner;
641
642 public class MergeTwoArray {
       public static void main(String[] args) {
643
         Scanner scan=new Scanner(System.in);
644
         TreeSet <Integer> ts=new TreeSet<Integer>();
645
646
         System.out.println("Enter the Array Size: ");
         int size=scan.nextInt();
647
         for(int i=0;i<size;i++)</pre>
648
649
650
           ts.add(scan.nextInt());
651
652
        ts.addAll(Arrays.asList(new Integer[] (scan.nextInt())));
         TreeSet <Integer> ts1=new TreeSet<Integer>();
653
654
         System.out.println("Enter the Array Size1:");
655
         int size1=scan.nextInt():
         for(int i=0;i<size1;i++)
656
657
658
           ts1.add(scan.nextInt());
659
660
        ts.addAll(ts1); //this is the only businees logic in this problem
        System.out.println("Final result in Set formet: "+ts);
661
662
        for(int x: ts)
663
          System.out.print(x +" ");
664
665
```

```
666
667
668
669 output:-
670 -----
    Sample Input 0
671
672 -----
673 6
674 35691316
675 5
676 4571011
677 Sample Output 0
678 ------
679 3 4 5 6 7 9 10 11 13 16
680 -----
681 Test9:- largest sum contiguous sub array
682 ******
                 ***********
683 Find the largest sum contiguous sub array which should not have negative numbers. We
    have to print the sum and the corresponding array elements which brought up the sum.
685
686 package com.basicjava;
    public class Test9LargestSubArray {
687
688
689
      public static void main(String[] args)
690
691
        int a[] = \{1,2,-8,2,15,3,-9\};
        int size=a.length;
692
693
        int firNeg = 0,secNeg=0,sum=0;
        StringBuilder sb=new StringBuilder();
694
        for(int i=0;i<size;i++)</pre>
695
696
697
          if(a[i]<0)
698
            System.out.println("First negative element in the location: "+i);
699
            firNeg=i;
700
```

```
701
            break;
702
703
704
        for(int i=firNeg+1;i<size;i++)</pre>
705
706
          if(a[i]<0)
707
708
             System.out.println("Second negative element in the location: "+i);
             secNeg=i;
709
710
            break;
711
712
        for(int i=firNeg+1;i<secNeg;i++)</pre>
713
714
715
          sum=sum+a[i];
716
          sb.append(a[i]+" ");
717
         System.out.println("The sum of numbers between the negative number is: "+sum);
718
         System.out.println("The elements in between the numbers are: ");
719
        System.out.println(sb);
720
721
722
723
724 output:
725 -----
726 First negative element in the location: 2
727 Second negative element in the location: 6
728 The sum of numbers between the negative number is: 20
729 The elements in between the numbers are:
730 2153
731
732 test:10
                     ReverseTheWord:
    *****
                      ******
733
734 public class Solution {
735
      public static void main(String args[] ) throws Exception {
```

```
736
        Scanner scan=new Scanner(System.in);
737
        String a[]=scan.nextLine().split(" ");
738
        int size=a.length:
        String sum="";
739
        for(int i=size-1;i>=0;i--)
740
741
742
          sum=sum+(a[i] +" ");
743
744
         System.out.println(sum);
745
746
747 }
748 output
749 -----
750 Sample Input 0
751
752 when are you coming
753 Sample Output 0
754 -----
    coming you are when
755
756
    Test10:-
                   GreaterThanPrevoiusElementsAre:
757
    *****
                   ************
758
    package com.basicjava;
759
760
    public class GreaterThanPreviousElement {
761
762
763
      public static void main(String[] args) {
764
        int a[]= \{1,-3,-5,7,6,2,-9,8\};
        StringBuilder sb=new StringBuilder();
765
        int max=a[0];
766
        sb.append(max +" ");
767
        for(int i=1;i<a.length;i++)</pre>
768
769
770
          if(max<a[i])
```

```
771
772
             sb.append(a[i]+" ");
773
774
           max=a[i];
775
         System.out.println("The elements that greater than previous are: "+sb);
776
777
778
      }
779
780 }
781
     output:
782
    The elements that greater than previous are: 178
784
785 Test12:
                      ReverseTheStringItSelf:
     *****
                      ********
786
    package HacerRankProblems:
787
788 import java.util.Scanner;
    public class ReverseTheWordItSelf {
789
790
      public static void main(String args[])
791
792
         Scanner scan=new Scanner(System.in);
         StringBuilder sb=new StringBuilder();
793
         //System.out.println("Enter the String: ");
794
795
         String a=scan.nextLine():
         sb.append(a);
796
         String b=sb.reverse().toString();
797
798
         String res[]=b.split(" ");
799
         String sum="";
         for(int i=res.length-1;i>=0;i--)
800
801
           sum=sum+(res[i] +" ");
802
803
         System.out.println(sum.trim());
804
805
```

```
806
807
808
809
     Sample Input
810
    when will you come
811
     Sample Output
812
813
     nehw lliw uoy emoc
814
815
816
    Test13:-
                      RotateArray:-
     *****
                      *****
817
818
     package com.basicjava;
819
     public class LogTest2 {
820
821
822
       public static void main(String[] args) {
823
         int inputArray[] = \{1,2,3,4,5\};
824
         int size = inputArray.length;
825
         int num = 3:
         int revArray[] = new int[size];
826
827
         int r = 0;
         int tempArray[] = new int[size];
828
829
         int t = 0:
830
         for (int i = size - 1; i \ge 0; i--) {
831
           revArray[r] = inputArray[i];
832
           r++;
833
834
         for (int i = num - 1; i \ge 0; i--) {
835
           tempArray[t] = revArray[i];
           t++;
836
837
838
         for (int i = size - 1; i >= num; i--) {
839
           tempArray[t] = revArray[i];
840
           t++;
```

```
841
        for (int x : tempArray) {
842
          System.out.println(x);
843
844
845
846
847
848 }
849 output:
850 -----
851 Sample Input 0
852 -----
853 5
854 54321
855 3
856 Sample Output 0
857 -----
858 32154
859 -----
860 test13:
                CollectionsRotationMinMaxSort
    *****
                **********
861
862 package com.basicjava;
863 import java.util.Collections;
864 import java.util.LinkedList;
865 import java.util.List;
866 import java.util.Scanner;
867 class Rotate
868 {
869
      Scanner scan=new Scanner(System.in);
870
871
      void program()
872
873
        List <Integer> a=new LinkedList <Integer> ();
        int size;
874
        System.out.println("enter the array size: ");
875
```

```
876
         size=scan.nextInt();
877
         System.out.print("enter the element side by side: ");
878
           for(int i=0:i<size:i++)</pre>
879
880
              a.add(scan.nextInt());
881
882
883
         System.out.print("enter the times to rotate:");
884
         int times=scan.nextInt();
         Collections.rotate(a, times);
885
         System.out.println("after rotation: " +a.toString());
886
         System.out.println("Rotated list is: " + a):
887
888
889
         Collections.reverse(a);
890
891
         System.out.println("reversed list is: " +a):
892
893
         Collections.sort(a);
         System.out.println("the Sorted list is: " + a);
894
895
         System.out.println("the maximum element in the listbis:" +Collections.max(a));
896
897
         System.out.println("the minimum element in the listbis:" +Collections.min(a));
898
899
900
         Collections.shuffle(a):
         System.out.println("the shuffeled list will be: " +a);
901
902
903 }
904
    public class RotateArrayUsingCollection {
       public static void main(String args[])
905
906
907
         Rotate ts=new Rotate();
908
         ts.program();
909
910
```

```
911
912 }
913
914
915 output
916 ******
917 enter the array size:
918 5
919 enter the element side by side: 5 10 15 20 25
920 enter the times to rotate:3
921 after rotation: [15, 20, 25, 5, 10]
922 Rotated list is: [15, 20, 25, 5, 10]
923 reversed list is: [10, 5, 25, 20, 15]
924 the Sorted list is: [5, 10, 15, 20, 25]
925 the maximum element in the listbis:25
926 the minimum element in the listbis:5
927 the shuffeled list will be: [25, 10, 20, 15, 5]
928 -----
```

929