```
Code: 1
package Topic_06_StringsAndArrayList;
import java.util.Scanner;
public class A_PrintAllPalindromicSubstrings {
        public static void main(String[] args) {
                 Scanner s = new Scanner(System.in);
                 String str = s.nextLine();
                 PrintAllPalindromicSubstrings(str);
        }
        private static void PrintAllPalindromicSubstrings(String str) {
                for (int i = 0; i <= str.length(); i++) {
                         for (int j = i + 1; j <= str.length(); j++) {
                                  String s = str.substring(i, j);
                                  boolean isPalindrome = checkPalindrome(s);
                                  if (isPalindrome) {
                                          System.out.println(s);
                                  }
                         }
                }
        }
        private static boolean checkPalindrome(String s) {
                int li = 0;
                int ri = s.length() - 1;
                 boolean isPalindrome = false;
                if (s.length() == 1) {
                         return true;
                }
                while (li <= ri) {
                         if (s.charAt(li) == s.charAt(ri)) {
                                  isPalindrome = true;
                         } else {
                                  isPalindrome = false;
                                  break;
                         }
                         li++;
                         ri--;
                return isPalindrome;
        }
}
```

```
Code: 2
package Topic_06_StringsAndArrayList;
import java.util.*;
public class B_String_Compression {
        public static String compression1(String str) {
                 String s = "";
                 for (int i = 0; i < str.length(); i++) {
                          if (i == str.length() - 1) {
                                  s = s + str.charAt(i);
                                  break;
                          }
                          char a = str.charAt(i);
                          char b = str.charAt(i + 1);
                          if (a != b) {
                                  s = s + str.charAt(i);
                         }
                 return s;
        }
        public static String compression2(String str) {
                 String s = "";
                 int count = 1;
                 for (int i = 0; i < str.length(); i++) {
                          if (i == str.length() - 1) {
                                  s = s + str.charAt(i) + (count > 1 ? count : "");
                                  break;
                          if (str.charAt(i) != str.charAt(i + 1)) {
                                  s = s + str.charAt(i) + (count > 1 ? count : "");
                                  count = 1;
                          } else {
                                  count++;
                         }
                 }
                 return s;
        }
        public static void main(String[] args) {
                 Scanner scn = new Scanner(System.in);
                 String str = scn.next();
                 System.out.println(compression1(str));
                 System.out.println(compression2(str));
        }
}
```

```
Code: 3
package Topic_06_StringsAndArrayList;
import java.util.Scanner;
public class C_ToggleCase {
        public static String toggleCase(String str) {
                StringBuilder rv = new StringBuilder();
                StringBuilder s1 = new StringBuilder(str);
                for (int i = 0; i < s1.length(); i++) {
                         Character ch = s1.charAt(i);// A,a
                         if (ch >= 'A' \&\& ch <= 'Z') {
                                 rv = rv.append(ch.toLowerCase(ch));
                         } else {
                                 rv = rv.append(ch.toUpperCase(ch));
                         }
                }
                return rv.toString();
        }
        public static void main(String[] args) {
                Scanner scn = new Scanner(System.in);
                String str = scn.next();
                System.out.println(toggleCase(str));
        }
}
```

```
Code: 4
package Topic_06_StringsAndArrayList;
import java.util.Scanner;
public class D_DiffBetweenTwoChar {
        public static String solution(String str) {
                 StringBuilder rv = new StringBuilder();
                 for (int i = 0; i < str.length(); i++) {
                         if (i == str.length() - 1) {
                                  rv.append(str.charAt(i));
                         } else {
                                  int diff = (int) str.charAt(i + 1) - (int) str.charAt(i);
                                  rv.append(str.charAt(i) + "" + diff);
                         }
                 return rv.toString();
        }
        public static String solution2(String str) {
                 StringBuilder rv = new StringBuilder();
                 rv.append(str.charAt(0));
                 for (int i = 1; i < str.length(); i++) {
                         char curr = str.charAt(i);
                         char prev = str.charAt(i - 1);
                         int diff = curr - prev;
                         rv.append(diff);
                         rv.append(str.charAt(i));
                 return rv.toString();
        }
        public static void main(String[] args) {
                 Scanner scn = new Scanner(System.in);
                 String str = "pepCODinG";// scn.next();
                 System.out.println(solution2(str));
        }
}
```

```
Code: 5
package Topic_06_StringsAndArrayList;
import java.util.ArrayList;
import java.util.Iterator;
import java.util.Scanner;
public class E_RemovePrime_ArrayList {
        public static void solution(ArrayList<Integer> al) {
                for (int i = al.size()-1; i >= 0; i--) {
                         int ele = al.get(i);
                         if (isPrime(ele) == true) {
                                  al.remove(i);
                         }
                }
        }
        static boolean isPrime(int number) {
                for (int div = 2; div * div <= number; div++) {
                         if (number % div == 0) {
                                  return false;
                         }
                return true;
        }
        public static void main(String[] args) {
                 Scanner scn = new Scanner(System.in);
                int n = scn.nextInt();
                ArrayList<Integer> al = new ArrayList<>();
                for (int i = 0; i < n; i++) {
                         al.add(scn.nextInt());
                }
                 solution(al);
                 System.out.println(al);
        }
```

}

```
Code: 6
package Topic_06_StringsAndArrayList;
import java.io.StringBufferInputStream;
import java.util.Scanner;
public class F_PermutationofStrings {
        public static void PermutationOfStrings(String str) {
                int n = str.length();
                long fact = getFactorial(str.length());
                for (int i = 0; i < fact; i++) {
                         int temp = i;
                         StringBuilder sb = new StringBuilder(str);
                         for (int j = n; j >= 1; j--) {
                                 int rem = temp % j;
                                  int q = temp / j;
                                  System.out.print(sb.charAt(rem));
                                  sb.deleteCharAt(rem);
                                  temp = q;
                         }
                         System.out.println();
                }
        }
        static long getFactorial(int n) {
                 long fact = 1;
                for (int i = 1; i \le n; i++) {
                         fact = fact * i;
                return fact;
        }
        public static void main(String[] args) {
                 Scanner scn = new Scanner(System.in);
                String str = scn.next();
                 PermutationOfStrings(str);
        }
```

}