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 <= 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);

}

}