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);
	}

}
```