Q.1 Process a coffee order: take customer size choice, calculate total price based on size and add-ons, and handle a list of 5 drink types.

CODE:

```
import java.util.*;
class CoffeeOrder {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String[] drinks = {"Espresso", "Latte", "Cappuccino", "Mocha", "Americano"};
        double[] prices = {100, 120, 130, 150, 110};
        System.out.println("Drinks:");
        for (int i = 0; i < drinks.length; i++)
            System.out.println((i + 1) + ". " + drinks[i] + " - ₹" + prices[i]);
        System.out.print("Choose drink (1-5): ");
        int choice = sc.nextInt();
        System.out.print("Size (S=1, M=1.5, L=2): ");
        double sizeFactor = sc.nextDouble();
        System.out.print("Add extra shot? (y/n): ");
        char add = sc.next().charAt(0);
        double total = prices[choice - 1] * sizeFactor;
        if (add == 'y' || add == 'Y') total += 30;
        System.out.println("Total Price: ₹" + total);
    }
}
```

Q.2 Create a method that accepts two numbers and an operation symbol. Use a switch to perform and return the result of addition, subtraction, multiplication, or division.

Code:

```
import java.util.*;
class Calculator {
  static double calc(double a, double b, char op) {
    switch(op) {
      case '+': return a + b;
      case '-': return a - b;
      case '*': return a * b;
      case '/': return b != 0 ? a / b : 0;
      default: return 0;
    }
  }
  public static void main(String[] args) {
    Scanner s = new Scanner(System.in);
    System.out.print("Enter two numbers: ");
    double x = s.nextDouble(), y = s.nextDouble();
    System.out.print("Enter operation (+,-,*,/): ");
    char op = s.next().charAt(0);
    System.out.println("Result: " + calc(x, y, op));
  }
}
```

Q.3 Input a string and count vowels, consonants, digits, and special characters using loops and conditionals.

Code:

```
import java.util.*;
class Count {
  public static void main(String[] a) {
```

```
    Scanner s=new Scanner(System.in);
    System.out.print("Enter text: ");
    String str=s.nextLine().toLowerCase();
    int v=0,c=0,d=0,sp=0;
    for(char ch:str.toCharArray()){
      if("aeiou".indexOf(ch)>=0)v++;
      else if(ch>='a'&&ch<='z')c++;
      else if(ch>='0'&&ch<='9')d++;
      else sp++;
    }
    System.out.println("Vowels:"+v+" Consonants:"+c+" Digits:"+d+" Special:"+sp);
  }
}
```

Q.4 For n customers, input name, account type, and balance. Apply 4% interest for savings and 6% for fixed accounts, then display updated balances.

Code:

```
import java.util.*;
class Bank {
  public static void main(String[] a) {
    Scanner s=new Scanner(System.in);
    System.out.print("Enter number of customers: ");
    int n=s.nextInt();
    String name,type; double bal;
    for(int i=1;i<=n;i++){
      System.out.print("Name: "); name=s.next();
      System.out.print("Account type (savings/fixed): "); type=s.next();
```

```
    System.out.print("Balance: "); bal=s.nextDouble();
    if(type.equalsIgnoreCase("savings")) bal+=bal*0.04;
    else if(type.equalsIgnoreCase("fixed")) bal+=bal*0.06;
    System.out.println(name+" Updated Balance: ₹"+bal);
   }
  }
}
```

Q.5 Read 5 daily temperatures into an array. Use a loop and a method to convert each temperature from Celsius to Fahrenheit, displaying both.

Code:

```
import java.util.*;
class TempConvert {
  static double toF(double c){ return (c*9/5)+32; }
  public static void main(String[] a){
    Scanner s=new Scanner(System.in);
    double[] t=new double[5];
    for(int i=0;i<5;i++){
      System.out.print("Temp "+(i+1)+": ");
      t[i]=s.nextDouble();
    }
    for(double c:t)
      System.out.println(c+"°C = "+toF(c)+"°F");
  }
}
```

Q.6 Accept number of units consumed and calculate bill based on slab rates using conditionals and methods.

Code:

```
import java.util.*;
class ElectricityBill {
  static double calcBill(int u){
    if(u<=100) return u*1.5;
    else if(u<=200) return 100*1.5+(u-100)*2;
    else return 100*1.5+100*2+(u-200)*3;
  }
  public static void main(String[] a){
    Scanner s=new Scanner(System.in);
    System.out.print("Enter units used: ");
    int u=s.nextInt();
    System.out.println("Total Bill: ₹"+calcBill(u));
  }
}
```

Q.7 Input a string and check if it’s a palindrome (ignore case and spaces). Use string methods and exception handling.

Code:

```
import java.util.*;
class PalindromeCheck {
  public static void main(String[] a) {
    try {
      Scanner s = new Scanner(System.in);
      System.out.print("Enter a string: ");
      String str = s.nextLine().replaceAll(" ", "").toLowerCase();
      String rev = new StringBuilder(str).reverse().toString();
      if(str.equals(rev))
```

```
System.out.println("Palindrome");
      else
System.out.println("Not a palindrome");
    } catch(Exception e) {
      System.out.println("Error: " + e);
    }
  }
}
```

Q.8 Read a word (String). Use a loop and a switch on each character to replace 'a' with '4', 'e' with '3', and 'o' with '0'.

Code:

```
import java.util.*;
class ReplaceChars {
  public static void main(String[] a){
    Scanner s=new Scanner(System.in);
    System.out.print("Enter a word: ");
    String w=s.nextLine(), r="";
    for(char c:w.toCharArray()){
      switch(c){
        case 'a': r+='4'; break;
        case 'e': r+='3'; break;
        case 'o': r+='0'; break;
        default: r+=c;
      }
    }
    System.out.println("Modified word: "+r);
```

```
  }
}
```