import java.util.Scanner;

public class BonusCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the current year: ");

int currentYear = scanner.nextInt();

System.out.print("Enter the year the employee joined the organization: ");

int joinedYear = scanner.nextInt();

int yearsOfService = currentYear - joinedYear;

if (yearsOfService > 5) {

System.out.println("Bonus: Rs. 5000/-");

} else if (yearsOfService >= 3) {

System.out.println("Bonus: Rs. 3000/-");

} else {

System.out.println("No bonus awarded.");

}

scanner.close();

}

}

2.

import java.util.Scanner;

public class DivisibilityChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int number = scanner.nextInt();

if (number % 7 == 0 && number % 13 == 0) {

int quotient7 = number / 7;

int remainder7 = number % 7;

int quotient13 = number / 13;

int remainder13 = number % 13;

System.out.println(number + " is divisible by both 7 and 13.");

System.out.println("Quotient when divided by 7: " + quotient7);

System.out.println("Remainder when divided by 7: " + remainder7);

System.out.println("Quotient when divided by 13: " + quotient13);

System.out.println("Remainder when divided by 13: " + remainder13);

} else {

System.out.println(number + " is not divisible by both 7 and 13 simultaneously.");

}

scanner.close();

}

}

3.

import java.util.Scanner;

public class LibraryFineCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of days the member is late to return the book: ");

int daysLate = scanner.nextInt();

if (daysLate <= 7) {

System.out.println("Fine: 50 paise");

} else if (daysLate <= 14) {

System.out.println("Fine: Rs. 1/-");

} else if (daysLate <= 21) {

System.out.println("Fine: Rs. 5/-");

} else {

System.out.println("Membership canceled due to late return.");

}

scanner.close();

}

}

4.

import java.util.Scanner;

public class NumberAnalyzer {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int largest = Integer.MIN\_VALUE;

int smallest = Integer.MAX\_VALUE;

int sum = 0;

int count = 0;

char choice;

do {

System.out.print("Enter a number: ");

int number = scanner.nextInt();

if (number > largest) {

largest = number;

}

if (number < smallest) {

smallest = number;

}

sum += number;

count++;

System.out.print("Do you want to enter another number? (y/n): ");

choice = scanner.next().charAt(0);

} while (choice == 'y' || choice == 'Y');

if (count > 0) {

double average = (double) sum / count;

System.out.println("Largest number: " + largest);

System.out.println("Smallest number: " + smallest);

System.out.println("Average: " + average);

} else {

System.out.println("No numbers were entered.");

}

scanner.close();

}

}

5.

import java.util.Scanner;

public class TotalExpensesCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the quantity purchased: ");

int quantity = scanner.nextInt();

System.out.print("Enter the price per item: ");

double pricePerItem = scanner.nextDouble();

double totalExpenses = quantity \* pricePerItem;

if (quantity > 50) {

totalExpenses \*= 0.9; // Apply 10% discount

} else if (quantity >= 25) {

totalExpenses \*= 0.95; // Apply 5% discount

}

System.out.println("Total expenses: Rs. " + totalExpenses);

scanner.close();

}

}

6.

import java.util.Scanner;

public class VowelChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a string: ");

String input = scanner.nextLine().toLowerCase(); // Convert input to lowercase for case-insensitive comparison

int vowelCount = 0;

boolean vowelPresent = false;

for (int i = 0; i < input.length(); i++) {

char ch = input.charAt(i);

if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

vowelCount++;

vowelPresent = true;

}

}

if (vowelPresent) {

System.out.println("Vowels are present.");

System.out.println("Total number of vowels: " + vowelCount);

} else {

System.out.println("No vowels are present.");

}

scanner.close();

}

}