1. Write a Java program where the current year and the year in which an employee joined the organization are entered through the keyboard. If the number of years for which the employee has served the organization is greater than 5, a bonus of Rs. 5000/- is given to the employee. If the years of service are between 3 and 5 (inclusive), a bonus of Rs. 3000/- is given. If the years of service are less than 3, then the program should print a message indicating that no bonus is awarded.

import java.util.Scanner;

public class EmployeeBonus {

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: ");

int joinYear = scanner.nextInt();

int yearsOfService = currentYear - joinYear

if (yearsOfService > 5) {

System.out.println("Congratulations! You have been awarded a bonus of Rs. 5000/-");

} else if (yearsOfService >= 3 && yearsOfService <= 5) {

System.out.println("Congratulations! You have been awarded a bonus of Rs. 3000/-");

} else {

System.out.println("Sorry, no bonus is awarded.");

} scanner.close();

}

}

2.A library charges a fine for every book returned late. For the first 7 days, the fine is 50 paise, for 8-14 days the fine is one rupee, and above 14 days fine is 5 rupees. If you return the book after 21 days, your membership will be canceled. Write a program to accept the number of days the member is late to return the book and display the fine or the appropriate message.

import java.util.Scanner;

public class LibraryFine {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of days late: ");

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("Your membership is canceled.");

} scanner.close();

}

}

3. . Write a Java program to check if a vowel is present in a string. Additionally, the program should count the total number of vowels present and display the count along with whether any vowels are present or not.

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();

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') {

vowelPresent = true;

vowelCount++;

}

}

if (vowelPresent) {

System.out.println("Vowels are present in the string.");

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

} else {

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

}

scanner.close();

}

}