**Coding:**

import java.util.Scanner;

public class CaesarCipherExample {

public static final String ALPHABET = "abcdefghijklmnopqrstuvwxyz";

public static String encryptData(String inputStr, int shiftKey) {

inputStr = inputStr.toLowerCase();

String encryptStr = "";

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

int pos = ALPHABET.indexOf(inputStr.charAt(i));

if (pos == -1) { // If character is not in ALPHABET, keep it as is

encryptStr += inputStr.charAt(i);

continue;

}

int encryptPos = (shiftKey + pos) % 26;

char encryptChar = ALPHABET.charAt(encryptPos);

encryptStr += encryptChar;

}

return encryptStr;

}

public static String decryptData(String inputStr, int shiftKey) {

inputStr = inputStr.toLowerCase();

String decryptStr = "";

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

int pos = ALPHABET.indexOf(inputStr.charAt(i));

if (pos == -1) { // If character is not in ALPHABET, keep it as is

decryptStr += inputStr.charAt(i);

continue;

}

int decryptPos = (pos - shiftKey) % 26;

if (decryptPos < 0) {

decryptPos = ALPHABET.length() + decryptPos;

}

char decryptChar = ALPHABET.charAt(decryptPos);

decryptStr += decryptChar;

}

return decryptStr;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

String inputStr = sc.nextLine();

System.out.println("Enter the shift key: ");

int shiftKey = Integer.parseInt(sc.nextLine());

System.out.println("Choose an option: ");

System.out.println("1. Encrypt");

System.out.println("2. Decrypt");

int choice = Integer.parseInt(sc.nextLine());

if (choice == 1) {

System.out.println("Encrypted Data ===> " + encryptData(inputStr, shiftKey));

} else if (choice == 2) {

System.out.println("Decrypted Data ===> " + decryptData(inputStr, shiftKey));

} else {

System.out.println("Invalid choice!");

}

sc.close();

}

}

**Output:**

