**Lab Practical #14:**

Implementation of parity bit check Using C/Java language with example.

**Practical Assignment #14:**

1. **C/Java Program: Implementation of parity bit check Using C/Java language.**

import java.util.Scanner;

public class ParityCheck {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter binary data: ");

String data = sc.next();

System.out.print("Enter parity type (E for Even, O for Odd): ");

char parityType = sc.next().charAt(0);

int count = 0;

for (int i = 0; i < data.length() - 1; i++) {

if (data.charAt(i) == '1') {

count++;

}

}

int receivedParityBit = data.charAt(data.length() - 1) - '0';

if (parityType == 'E') {

if ((count + receivedParityBit) % 2 == 0)

System.out.println("No Error: Even parity maintained.");

else

System.out.println("Error Detected: Even parity failed.");

}

else if (parityType == 'O') {

if ((count + receivedParityBit) % 2 == 1)

System.out.println("No Error: Odd parity maintained.");

else

System.out.println("Error Detected: Odd parity failed.");

}

else {

System.out.println("Invalid Parity Type!");

}

sc.close();

}

}