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Dept: CSE
Subject: MicroProcessor Lab
KSA-03
Title: Implementation of loop using assembly language.

1. Enter Put the three Number and and Store the number n1,n2,n3 and using for loop and finally we check this number should be even or odd?

Answer:

```
.MODEL SMALL

.STACK 100H
.DATA

    MSG1 DB 'Enter first number: $'
    MSG2 DB 'Enter second number: $'
    MSG3 DB 'Enter third number: $'

    EVEN_MSG DB ' is even$'
    ODD_MSG DB ' is odd$'

    N1 DW ?
    N2 DW ?
    N3 DW ?
    NUMBERS DW ?

.CODE

MAIN PROC




    MOV AX, @DATA
    MOV DS, AX
```

```asm
        MOV DX, OFFSET MSG1
        MOV AH, 09H
        INT 21H
        MOV AH, 01H
        INT 21H
        SUB AL, 30H
        MOV AH, 0
        MOV N1, AX


        MOV DX, OFFSET MSG2
        MOV AH, 09H
        INT 21H
        MOV AH, 01H
        INT 21H
        SUB AL, 30H
        MOV AH, 0
        MOV N2, AX


        MOV DX, OFFSET MSG3
        MOV AH, 09H
        INT 21H
        MOV AH, 01H
        INT 21H
        SUB AL, 30H
        MOV AH, 0
        MOV N3, AX


        MOV CX, 3
        LEA SI, N1
LOOP_CHECK:
        MOV AX, [SI]
        TEST AX, 1
        JZ EVEN


        MOV DX, OFFSET ODD_MSG
        MOV AH, 09H
        INT 21H
        JMP CONTINUE

EVEN:
        MOV DX, OFFSET EVEN_MSG
        MOV AH, 09H
        INT 21H
```

```
CONTINUE:
    ADD SI, 2  r
    LOOP LOOP_CHECK


    MOV AH, 4CH
    INT 21H

MAIN ENDP
END MAIN
```