**Practical - 26**

**Aim:** Write an assembly program to read a list of n numbers and generate to separate list of even numbers and odd numbers at memory locations 3000h and 4000h memory locations respectively.

**Description of instructions used:**

**DB** **(DEFINE BYTE):** The **DB** directive is used to declare a byte type variable, or a set aside one or more storage locations of type byte in memory.

**LOOP:** Used to loop a group of instructions until the condition satisfies, i.e., CX = 0

**INT:** Used to interrupt the program during execution and calling service specified.

**INC:** Used to increment the provided byte/word by 1.

**ADD:** Used to add the provided byte to byte/word to word.

**Code:**

.model m1

.data

n db 00h,01h,02h,03h,04h,05h,06h,07h,08h,09h,0Ah,0Bh,0Ch,0Dh,0Eh,0Fh

.code

mov cx,10h

mov bh,02h

next:

mov ax,data

mov ds,ax

mov bl,[si]

inc si

xor ax,ax

mov al,bl

div bh

cmp ah,00h

je next1

jmp next

next1:

mov dx,3000h

mov ds,dx

mov [di],bl

inc di

loop next

mov cx,10h

mov bh,02h

mov di,00h

mov si,00h

next3:

mov ax,data

mov ds,ax

mov bl,[si]

inc si

xor ax,ax

mov al,bl

div bh

cmp ah,01h

je next2

jmp next3

next2:

mov dx,4000h

mov ds,dx

mov [di],bl

inc di

loop next3

**Output:**

