

Experiment - 4

Nageshwar prasad Yadav
AP21110011195

1. Write an assembly language program to reverse a given array of 16-bit numbers.

```
.MODEL SMALL
.STACK 100H
.DATA
STRING DB '4 6 8 2', '$'
.CODE
MAIN PROC FAR
MOV AX,@DATA
MOV DS,AX
CALL REVERSE
LEA DX,STRING
MOV AH, 09H
INT 21H
MOV AH, 4CH
INT 21H
MAIN ENDP
REVERSE PROC
    MOV SI, OFFSET STRING
    MOV CX, 0H
LOOP1:
    MOV AX, [SI]
    CMP AL, '$'
    JE LABEL1
    PUSH [SI]
    INC SI
    INC CX
    JMP LOOP1
LABEL1:
    MOV SI, OFFSET STRING
```

```
LOOP2:
    CMP CX,0
    JE EXIT
    POP DX
    XOR DH, DH
    MOV [SI], DX
    INC SI
    DEC CX
    JMP LOOP2
```

```
EXIT:
    MOV [SI], '$ '
    RET
```

```
REVERSE ENDP
END MAIN
```