**Problem statement:**

Input a string.Reverse each word of string and print in capitalize form.Print number of vowels in the string.

**Code:**

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| --- |
| .MODEL **SMALL**  .**STACK** 100H  **.DATA**  ARR **DB** 40 DUP**(**'$'**)**    MSG\_INP **DB** 'ENTER A STRING(like:abc def gh):', 0DH, 0AH, '$'  NL **DB** 0DH,0AH,'$'  MSG\_REV **DB** 0DH,0AH,'REVERSE OF EACH WORD OF THE LINE: $'  MSG\_VOWEL **DB** 0DH,0AH,'NUMBER OF VOWEL IN INPUT STRING: $'    CNT\_V **DB** ?      .**CODE**  MAIN PROC  *; initialize DS*  **MOV** **AX**, @**DATA**  **MOV** **DS**, **AX**    **MOV** **AH**, 9  **LEA** **DX**,MSG\_INP*;INPUT PROMT*  **INT** 21H    **LEA** **DX**,ARR  **MOV** **AH**,10  **INT** 21H*;INPUT STRING UNTIL CARRIAGE RETURN 0DH*    **LEA** **DX**,MSG\_REV  **MOV** **AH**,9  **INT** 21H    **LEA** **SI**,ARR*;ADDRESS 1ST ELEMENT OF ARRAY*  **ADD** **SI**,2  **MOV** CNT\_V,0*;NO OF VOWEL=0*      CMP\_LOOP:  **MOV** **AL**,**[SI]**  **CMP** **AL**,0DH *;IF CARRIAGE RETURN END INPUT 0DH/13*  **JE** END\_CMP    **PUSH** **SI**  **MOV** **CX**,0    REV\_WORD:  **MOV** **AL**,**[SI]**  **CMP** **AL**,' '*; AH=0 & AL=' '*  **JE** END\_REVW    **MOV** **AL**,**[SI]**  **CMP** **AL**,0DH  **JE** END\_REVW    *;PUSH A WORD IN STACK*  **MOV** **AL**,**[SI]**  **PUSH** **AX**  **INC** **SI**  **INC** **CX**  **JMP** REV\_WORD  END\_REVW:    CNT\_VOWEL:    **POP** **AX**  **CMP** **AL**,'a'  **JE** INC\_VOWEL  **CMP** **AL**,'e'  **JE** INC\_VOWEL  **CMP** **AL**,'i'  **JE** INC\_VOWEL  **CMP** **AL**,'o'  **JE** INC\_VOWEL  **CMP** **AL**,'u'  **JE** INC\_VOWEL    PRINT:  **JMP** CONTINUE\_LOOP    INC\_VOWEL:  **INC** CNT\_V    CONTINUE\_LOOP:  **MOV** **DL**,**AL**  **SUB** **DL**,32  **MOV** **AH**,2  **INT** 21H    **LOOP** CNT\_VOWEL    *;PRINT SPACE*  **MOV** **DL**,' '  **MOV** **AH**,2  **INT** 21H    **INC** **SI**  **JMP** CMP\_LOOP    END\_CMP: *;END OF STRING*      **LEA** **DX**,MSG\_VOWEL  **MOV** **AH**,9  **INT** 21H    **MOV** **AL**,CNT\_V  **ADD** **AL**,30H*;CONVERT NUMBER TO ASCII VALUE*  **MOV** **DL**,**AL**  **MOV** **AH**,2  **INT** 21H    EXIT:  **MOV** **AH**, 4CH  **INT** 21H  MAIN ENDP  END MAIN  *;input a line: this is a test*  *;output: SIHT SI A TSET*  *;no of vowels: 4* |

**Output:**

