CODE:

```
.data
        msg:  .asciiz "Enter your string ->  "
        check1: .asciiz " Given input is Palindrome "
        check2: .asciiz "Given input is not Palindrome"
        str: .space 50
.text
main:
        li $v0, 4
        la $a0, msg
        syscall

        la $a0, str
        li $a1, 50
        li $v0, 8
        syscall

        la $t0, str
        la $t1, str
calculating_length_ofloop:
        lb $t2, ($t1)
        beqz $t2, ending
        addu $t1, $t1, 1
        b calculating_length_ofloop
ending:
        subu $t1, $t1, 2
Conditional_loop:
        bge $t0, $t1 check_ispalindrome
        lb $t2, ($t0)
```

```
        lb $t3, ($t1)
        bne $t2, $t3 check_notpalindrome
        addu $t0, $t0, 1
        subu $t1, $t1, 1
        b Conditional_loop
check_ispalindrome:
        la $a0, check1
        li $v0, 4
        syscall
        b exit
check_notpalindrome:
        la $a0, check2
        li $v0, 4
        syscall
        b exit
exit:
        li $v0, 10
        syscall
```

OUTPUT:

```
Enter your string ->  45
Given input is not Palindrome
-- program is finished running --
```

CODE:

```
.data
vowel:     .asciiz     "aeiou"
msg_prompt: .asciiz     "Enter string: "
msg_out:    .asciiz     "Number of vowels is: "
msg_nl:     .asciiz     "\n"
str:       .space      80
```

```
   .text
   .globl  main
main:

   li     $v0,4
   la     $a0,msg_prompt
   syscall



   li     $v0,8
   la     $a0,str
   li     $a1,80
   syscall

   li     $s2,0
   la     $s0,str

string_loop:
   lb     $t0,0($s0)
   addiu   $s0,$s0,1
   beqz    $t0,string_done

   la     $s1,vowel             # point to vowels

vowel_loop:
   lb     $t1,0($s1)
   beqz    $t1,string_loop
   addiu   $s1,$s1,1
   bne     $t0,$t1,vowel_loop
   addi    $s2,$s2,1
   j       string_loop
```

```
string_done:

   li     $v0,4
   la     $a0,msg_out
   syscall

   # print vowel count
   li     $v0,1
   move    $a0,$s2
   syscall

   # print a newline
   li     $v0,4
   la     $a0,msg_nl
   syscall

   # exit program
   li     $v0,10
   syscall
```

OUTPUT:

```
Enter string: dha suffa university
Number of vowels is: 7
```