Assignment 3   30 points

Q 1) Fill in the blanks below?   10 Points

Instruction	Before shift AL / AX(last two lines)	After shift AL /AX	CF
shl AL,1	1010 1110		
shr AL,1	1010 1110		
mov CL,3 shl AL,CL	0110 1101		
mov CL,5 shr AX,CL	1011 1101 0101 1001		
ror AX,CL			

Q 2) Do you need to know the initial contents of the AX register in order to determine the contents of the AX register after executing the following code? If so, explain why. Otherwise, find the AX contents. (5 points)

```
(a)                              (b)
    mov    DX,AX                     mov    DX,AX
    not    AX                        not    AX
    or     AX,DX|                    and    AX,DX
```

Q 3) In the following code fragment, state whether mov AX,10 or mov BX,1 is executed:(5 points)

```
(a)
       mov    CX,5
       sub    DX,DX
       cmp    DX,CX
       jge    jump1
       mov    BX,1
       jmp    skip1
  jump1:
       mov    AX,10
  skip1:
           . . .
```

Assignment 3   30 points

Q 4) Write a program such that it accepts a string from the keyboard
consisting of digit and non-digit characters. The program should
display the sum of the digits present in the input string. All non-
digit characters should be ignored.   (10 Points)

For example, if the input string is
        ABC1?5wy76:˜2

the output of the program should be
sum of individual digits is: 21

ASCII assigns a special set of contiguous values to the digit characters, it is straightforward to get their numerical value. All we have to do is to mask off the upper half of thebyte using and AL,0FH al has ascii value.

You can use Irvine library to obtain a string, if you are unable to do
that store the string in a variable and write the program. You will
lose 2 points.