**Computer Architecture and Organization**

**Lab Task-1**

**Final Term**

1. Write assembly code for the following structure.

If(AL >= ‘A’) then put 5 in cl and print

else put 6 in cl and print.

1. Write a code to implement the following-

If it's "A", then execute carriage return.

If it's "Bn, then execute line feed.

If it's any other character, then return to DOS.

1. Write assembly code for the following structure.

IF AY < BX

THEN

put 0 in AX

ELSE

IF BX < CX

THEN

put 0 in BX

ELSE

put 0 in CX

END IF

END IF

1. Write a program that will prompt the user to enter anything, display it on the next line in, and ask the user if he or she wants to do it again. If the user types "y" or "Y", the ·program repeats; If the user types anything else, the program terminates. If the user enters an illegal character, prompt the user to try again.

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**Lab Task-2**

**Final Term**

1. A program checks whether the value of DL register is 1,2,3 or 4. If the value is 1 or 3 then it prints ‘o’ and if the value is 2 or 4 then it prints ‘e’.
2. A program checks the value of DL and CL register. If the value of DL and CL is below 3 then it prints ‘b’.
3. Write a program that takes input from the user. If the input is ‘1’ then the program will show sum of 2 and 3. If the input is ‘2’ then the program will show the subtraction of 4 and 3. If the input is ‘3’ then the program will print the input. For other cases the program will show a character.
4. Write a program to print any ASCII character for 30 times.
5. Write a program to print any ASCII character for 30 times in 3 separate lines each containing 10 characters.
6. Write a code that takes input from a user and stops taking it when ‘enter’ pressed.
7. Write a code that takes input from a user and stops when the length of the input is more than 5.
8. Convert the following high-level pseudocode into assembly code

If(AL >= 2||AL <= 9)

{

ask user to input a character and print

}

Else

{

If(AL == character)

{

print ‘c’

}

Else

{ print ‘n’

}

}

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**Lab Task-3**

**Final Term**

1. Write an assembly code to take an input and test whether it is odd or oven. If odd print ‘o’ and if even print ‘e’.
2. Write a case-based code to show how we can set, clear and compliment bits.
3. Write an assembly code to set the 3rd and 5th of a register containing the number 4h.
4. Write an assembly code to convert ‘f’ to ‘F’.
5. Write an assembly code to convert ‘F’ to ‘f’.
6. Write an assembly code to left shift the contents a register by the total number of time input by the user.
7. Write an assembly code to right shift the contents a register by 1.
8. Write an assembly code to right shift the contents a register by the total number of time input by the user.

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**Lab Task-4**

**Final Term**

1. Write a program that prompts the user to enter a character, and on subsequent lines prints its ASCII code in binary and the total number of 1 bit in the next line.
2. Write a program that prompts the user to enter a character and prints the ASCII code of the character in hex on the next line. Repeat this process until the user types a carriage return.
3. Write a program that prompts the user to type a binary number of 16 digits or less, and outputs It In hex on the next line. If the user enters an illegal character, he or she should be prompted to begin again.