**LAB TASK**

Q) Implement an algorithm to determine if a given year is a leap year. A leap year is divisible

by 4, but not divisible by 100, except if it is also divisible by 400.

1. Ask the user to enter a year
2. Check If year is divisible by 4 and is also divisible by 400 and is not divisible by 100
3. if yes, display to the user that the year that they have entered In a leap year
4. if no,display to the user that the year that they have entered isn’t a leap year

2. Implement an algorithm to count the number of occurrences of each character in a given string.

1. Ask the user to enter string
2. Ask user to enter letter
3. Set occurrence to 0
4. For every occurrence of (lettter) in (string), we will increment occurrence by 1
5. Display occurrence to user when we have reached the end of the string

3. Write an algorithm to calculate x raised to the power y (i.e., x y ) without using built-in

power functions.

1. Ask user to enter base
2. Ask user to enter power
3. Multiply base (power)times to itself
4. Display to the user the final result
5. Calculate the area of a circle given its radius
6. Ask the user to enter radius
7. Set R to (radius\*radius)
8. Set area to (3.14\*R)
9. Display area to the user

5. Find the median of three given numbers.

1. Ask the user to enter number1
2. Ask the user to enter number2
3. Ask the user to enter number3
4. Set mid to ((3+1)/(2))
5. Display number 2 to the user