ACADGILD ASSIGNMENT 3.1

1. Define an m x n matrix of zeros and then enters a nested-for loop to fill the locations of the matrix, only if the two indexes differ.

• The purpose is to create a lower triangular matrix, that is a matrix whose elements below the main diagonal are non-zero, the others are left untouched to their initialized zero value.
   • When the indexes are equal (if condition in the inner loop, which runs over j, the column index), a break is executed and the innermost loop is interrupted with a direct jump to the instruction following the inner loop, which is a print; then control gets to the outer for condition (over the rows, index i), which is evaluated again.
• If the indexes differ, the assignment is performed and the counter is incremented by 1.
• At the end, the program prints the counter ctr, which contains the #number of elements that were assigned.

Answer:
m=10;n=10;
ctr=0;
x_mat = natrix(0,m,n)
x_mat
for(I in 1:m) {
for(j in 1:n)
{
If(i==j)
{

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Break;
} else
{
X_mat [i ,j ] = i +j # we assign  the values only
Ctr= ctr + 1
}
}
 Print ( i + j)
}
Print (ctr)
X_mat
```