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1) C program to implement sum of principl diagonal and secondary diagonal elements.

= Algorithm

Step 1: Start

Step 2: a=0, sum=0

Step 3: Enter order of matrix
read m,n

Step 4: if(m==n) // If false goto step 4.3
print "Enter the coefficient of matrix"
for (i=0; i<n; i++)
{ for (j=0; j<n; j++)
read array[i][j]
}

4.1 : print "The given matrix is
output matrix element a[i][j]

4.2 : for(i=0; i<m; i++)
{ sum = sum + array[i][j]
a = a + array[j][m-1-i]
}

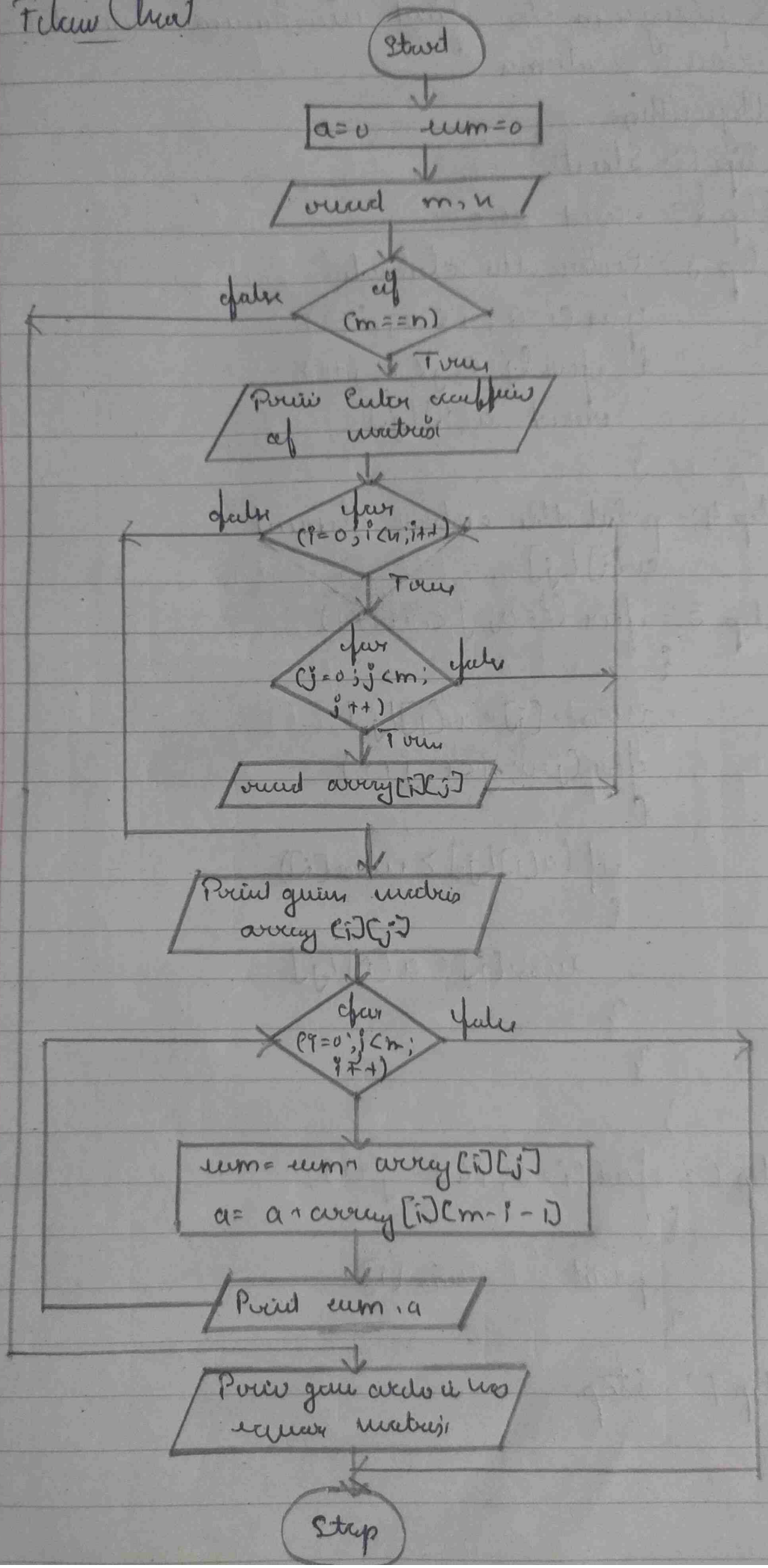
4.3 : print sum of main diagonal
print sum

4.4 : print sum of off diagonal
print a

4.5 : else
print the given order is not square
matrix

Step 5 :- Stop.

Flow Chart


Start
a=0 sum=0
read m, n
if (m==n)
false
True
Print Enter coefficient of matrix
for (i=0; i<n; i++)
false
True
for (j=0; j<m; j++)
false
True
read array[i][j]
Print given matrix array[i][j]
for (i=0; i<m; i++)
false
sum = sum + array[i][j]
a = a + array[i][m-i-1]
Print sum, a
Print given array is not square matrix
Stop