***Sparse Matrix with triplet Implementation***

#include<conio.h>

#include<stdio.h>

int main()

{

int S[10][10],m,n,i,k=0,size=0;

printf("Enter number of rows in the matrix : ");

scanf("%d",&m);

printf("Enter number of columns in the matrix : ");

scanf("%d",&n);

printf("Enter elements in the matrix : ");

for (int i = 0; i < m; i++)

for (int j = 0; j < n; j++)

scanf("%d",&S[i][j]);

printf("The matrix is \n");

for (int i = 0; i < m; i++) {

for (int j = 0; j < n; j++) {

printf(" %d ",S[i][j]);

if (S[i][j] != 0)

size++;

}

printf("\n");

}

int M[3][size];

for (int i = 0; i < m; i++)

for (int j = 0; j < n; j++)

if (S[i][j] != 0)

{

M[0][k] = i;

M[1][k] = j;

M[2][k] = S[i][j];

k++;

}

printf("Triplet representation of the matrix is \n");

for (int i=0; i<3; i++)

{

for (int j=0; j<size; j++)

printf(" %d ", M[i][j]);

printf("\n");

}

return 0;

}