**Write a Java Program to determine whether a given matrix is a sparse matrix.**

**import** java.util.\*;

**public** **class** SparseMatrix

{

**public** **static** **void** main(String[] args) {

**int** m, n, s, c = 0,i,j;

**int** a[][] = **new** **int**[10][10];

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("Enter Number Of Rows And Column:");

m=sc.nextInt();

n=sc.nextInt();

System.***out***.println("Enter The Array Elements:");

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

{

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

{

a[i][j] = sc.nextInt();

}

}

System.***out***.println("The Array is:");

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

{

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

{

System.***out***.print(a[i][j]+ " ");

}

System.***out***.println();

}

s = m \* n;

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

{

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

{

**if**(a[i][j] == 0)

c++;

}

}

**if**(c > (s/2))

System.***out***.println("Given Matrix Is A Sparse Matrix");

**else**

System.***out***.println("Given Matrix Is Not A Sparse Matrix");

}

}

**Output:**

