**Matrix Median**

#include<bits/stdc++.h>

int getMedian(vector<vector<int>> &matrix) {

int minVal = INT\_MAX;

int maxVal = INT\_MIN;

int numRows = matrix.size();

int numCols = matrix[0].size();

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

minVal = min(minVal, matrix[i][0]);

maxVal = max(maxVal, matrix[i][numCols - 1]);

}

int medianPosition = (numRows \* numCols + 1) / 2;

while (minVal <= maxVal) {

int midVal = minVal + (maxVal - minVal) / 2;

int count = 0;

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

int index = upper\_bound(matrix[i].begin(), matrix[i].end(), midVal) - matrix[i].begin();

count += index;

}

if (count < medianPosition) {

minVal = midVal + 1;

} else {

maxVal = midVal - 1;

}

}

return minVal;

}