a) Write a c program to sort in ascending order and reverse the individual row elements of an
mxn matrix
input : 3 4
1 4 2 3
7 8 10 9
6 3 5 2
output:
4 3 2 1
10 9 8 7
6 5 3 2

```
#include <stdio.h>


void sortRow(int arr[], int n) {
    // Bubble sort
    for (int i = 0; i < n - 1; i++) {
        for (int j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                // Swap
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
        }
    }
}


void reverseRow(int arr[], int n) {
```

```
    // Reverse elements of the array
    for (int i = 0; i < n / 2; i++) {
        // Swap elements at index i and n-i-1
        int temp = arr[i];
        arr[i] = arr[n - i - 1];
        arr[n - i - 1] = temp;
    }
}

int main() {
    int m, n;
    printf("Enter the number of rows and columns of the matrix: ");
    scanf("%d %d", &m, &n);

    int matrix[m][n];

    printf("Enter the elements of the matrix:\n");
    for (int i = 0; i < m; i++) {
        for (int j = 0; j < n; j++) {
            scanf("%d", &matrix[i][j]);
        }
    }

    printf("Sorted matrix with reversed row elements:\n");
    for (int i = 0; i < m; i++) {
```

```
        // Sort the row
        sortRow(matrix[i], n);
        // Reverse the sorted row
        reverseRow(matrix[i], n);
        // Print the row
        for (int j = 0; j < n; j++) {
            printf("%d ", matrix[i][j]);
        }
        printf("\n");
    }

    return 0;
}
```

b) Write a c program to sort elements in row wise and print the elements of matrix in Column major order

Input: 3 4
1 4 2 3
7 8 10 9
6 3 5 2

Output:
1 7 2
2 8 3
3 9 5
4 10 6

```
#include <stdio.h>

void sortRow(int arr[], int n) {
```

```
    // Bubble sort
    for (int i = 0; i < n - 1; i++) {
        for (int j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                // Swap
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
        }
    }
}

int main() {
    int m, n;
    printf("Enter the number of rows and columns of the matrix: ");
    scanf("%d %d", &m, &n);

    int matrix[m][n];

    printf("Enter the elements of the matrix:\n");
    for (int i = 0; i < m; i++) {
        for (int j = 0; j < n; j++) {
            scanf("%d", &matrix[i][j]);
        }
```

```
    }

    // Sort each row
    for (int i = 0; i < m; i++) {
        sortRow(matrix[i], n);
    }

    printf("Matrix elements in column-major order after sorting row-wise:\n");
    for (int j = 0; j < n; j++) {
        for (int i = 0; i < m; i++) {
            printf("%d ", matrix[i][j]);
        }
        printf("\n");
    }

    return 0;
}
```