```
public class MaximumMovesInMatrix {
    public int maxMovesInMatrix(int[][] grid) {
        int m = grid.length;
        int n = grid[0].length;


        int[][] memo = new int[m][n];


        for (int i = 0; i < m; i++) {
            memo[i][n - 1] = 1;
        }


        for (int col = n - 2; col >= 0; col--) {
            for (int row = 0; row < m; row++) {

                memo[row][col] = 1;


                for (int i : new int[]{-1, 0, 1}) {
                    int newRow = row + i;
                    int newCol = col + 1;


                    if (0 <= newRow && newRow < m && grid[newRow][newCol] > grid[row][col]) {
                        memo[row][col] = Math.max(memo[row][col], 1 + memo[newRow][newCol]);
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                }
            }
        }
    }



    int maxMoves = 0;
    for (int i = 0; i < m; i++) {
        maxMoves = Math.max(maxMoves, memo[i][0]);
    }

    return maxMoves;
}

public static void main(String[] args) {
    int[][] grid = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};
    MaximumMovesInMatrix solution = new MaximumMovesInMatrix();
    int result = solution.maxMovesInMatrix(grid);
    System.out.println(result);
}
}
```