

Northern Michigan University (Marquette Co, MI)

CS 345-01-25W: Android Programming

Program 1

Due: Wednesday 29 January 2025 1:00 P.M. EST

Create a folder called “PG1” in the top level of your CS345-01-25W folder. Place all files pertaining to this assignment into the top level of your PG1 folder. Place a (possibly empty) file called “DONE” into this folder when you are ready to have your programs graded. The only files you need to turn in are the .kt files. Please don't turn in any files other than these!!

Write the following program in Kotlin:

The program asks the user for a number of rows. (Call it r .) Then the program asks the user for a number of columns. (Call it c .) The program should then read in r lines of text, each containing exactly c columns. These lines will be stored in 2-dimensional array of character, $r \times c$.

You should then print out the character that appears most frequently in a row, horizontally, vertically, or diagonally.

For example,

```
ABCD
EABB
BBAC
```

Your program should print A, since A appears in a diagonal of three A's. Although there are five B's, no more than two ever appear in a row, column, or diagonal, adjacent to each other.

If there is a tie for most frequent, all of the most frequent characters should be printed.

```
Please enter the number of rows: 3
Please enter the number of columns: 4
```

```
Row 1: ABCD
Row 2: EABB
Row 3: BBAC
```

```
Most frequent linear character: A
```