[ The ATeam ]

Define “strMSG” function to numbering for each line

- Numbering for each line

- return numbered line

Define “ChangeLetter” function to change each line with lower or upper case.

- If length of line is over 20, change letter with lower case

- If length of line is less or equal 20, change letter with upper case

- return case changed line

Main Function

Open original file to read and outfile to write

Print original file

Numbered list = [ ] : Make a numbered line list

Call the “strMSG” function to number each line and numbered\_line assign to new variable

Append numbered line to the numbered list

CaseChanged list = [ ] : Make a case changed line list

Call the “ChangeLetter” function to change each line with lower or upper case and assign to new variable

Append case changed line to CaseChanged list

Import random

Generate random number between 1 to line number(10)

If Line number is random number, delete line

Else Line number is not random number, do not change it.

Write each line to the out file.

Close original file and out file

Open outfile again to print

Print outfile

Close outfile

[ Battleship ]

Define “Make\_Array” function to convert file to 2d-array matrix

- Make a Array [ ]

- Make each line list splitted by “,”

- Return Array

Define “Input\_Validation” function to validate input value

- if I input “Enter” key or “”, input again

- if first letter of input is not A to J, input again (Use ASCII code)

- if second letter of input is not numeric, input again

- if second letter is not between 1 to 10, input again

- if previous 4 conditions are met, make each input number same with index

Second input is integer and subtract –1 (index starts from 0)

First input subtract –65 (ord[“A”] is 65, index starts from 0)

- if I input same location I’d already hit, input again

- if it is not, it’s perfect! Exit loop!

- Return X\_Row, Y\_Column

Main Function

Make a list of ship location (this is for challenge)

Open map.txt file as objFile

Call “Make\_Array” function to convert objFile to 2d-array matrix and assign it to new variable

Make a scoreGrid with “”(chr(32)) using for loop

Make a answer list (For chanllenge)

Print Matrix (scoreGrid)

Call Input\_Validation function to validate input

If input the place which ship is located, change the value with “O” in scoreGrid

If not, change the value with “X” in scoreGrid

Append (X,Y) to the answer list

If answer list is including any of ship location list, print which ship is bombed! (Challenge)

If user hit all ships, print success message

If user failed, print fail message with success number!