Go Programming Fundamentals

Assignment #2 Due Date:

Convert C Source Code in to Go Language

Programming Requirements

- Submit your assignment into a **single Go file**.
- You must write **your name** at the top of your assignment source list.
- Write your **compiler version and operating system name** at the top of your assignment source list.
- Assignment that is turned in late will lose **one point per day** starting after the due date.
- Make sure that you do appropriate **error checking** in your program. (User-friendliness)
- Do not turn in **incomplete or crashing program**, you will receive **zero points**.
- Do not **Import third part packages** into your golang source file, your assignment will not be graded.
- Make sure to read **grading policy** carefully that will tell you how your assignment is graded.

Assignment #2 Grading Policy

Category	**Points Possible**	**Points Received**
Correctness and Efficiency	10	
Meaningful variable names	10	
Split C code into multiple Go functions	15	
Using **make** for array allocation	20	
Pass 2-dimensional array as a parameter to Go functions	20	
Complete Documentation	10	
Style and code readability	15	
Total	100	

 Version 2.0

Assignment Description

In assignment #1 you will learn how to convert C source code given in **hw2.c** file into a Go language code. You will split C source code into multiple Go functions. It is your responsibility to organize the source code the best possible way, **without changing** the **logic** of the **C program**. You will use **fmt** package to utilize its I/O functions (printf and scanf). You will allocate memory for two dimensional array using **make function**, please see example on page 10 of chapter 3 of class notes. Following is the hint how you may want to split the C code:

```
func createMatrix(matrixSize int) (twoDim [][]int) {
// Use make to create two dimensional array
// allocate memory for 1-dimensional array of size matrixSize
// within for loop allocate memory for 2-dimension array
}

func initMatrix(Pass array size, Pass 2-dimension array) {
// Create nested for loop to initialize array
}

func calculateMatrix(Pass Parameter as needed) {
// Convert C code calculation without changing the logic.
}

func displayMatrix(Pass Parameter as needed) {
Create nested for loop to read each array element and display
matrix with column totals and row totals
}
```

Please make sure to follow the grading policy while you are doing assignment #2.

