Lab Assignment : 1

Create library files for performing various operations on matrices & vectors.

Operations to be performed on Vectors (create separate function for each):

1. Define a vector (Vec 4)
2. Print a vector (vec 4)
3. Cross product (vec4 x Vec 4)
4. Dot product (vec4.vec4)
5. Scalar multiplication (s * Vec4)
6. Addition (Vec 4 + Vec4)
7. Subtraction(Vec 4 - Vec4)
8. Multiplication(Vec 4 * Vec4)

Operations to be performed on matrices (4x4) (create separate function for each):

1. Define a matrix (mat 4x4)
2. Print a matrix (mat 4x4)
3. Scalar multiplication (s * mat4)
4. Addition (mat4x4 + mat4x4)
5. Subtraction(mat4x4 - mat4x4)
6. Multiplication(mat4x4 * mat4x4)
7. Inverse of a matrix
8. Transpose of a matrix.

Hint: For this project you will need a total of 3 files.

1. LabAssigment1.h : This is a header file. It will contain the structures and signatures of functions you need for operating on vectors and matrices.
2. LabAssignment.c: This file will contain all the implementations of the functions declared in .h file. (Don't forget to include the .h file in this)
3. LabAssignmentMain.c: This is the file where you will have the main() function. Use all the functions you have defined in this file. (Include .h file)