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Lab 03 - matrix.pdf
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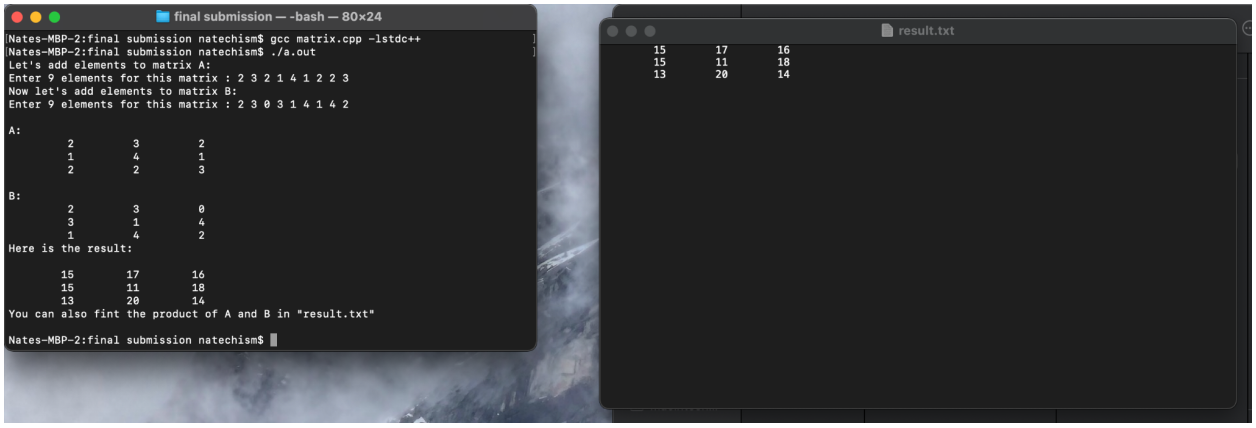
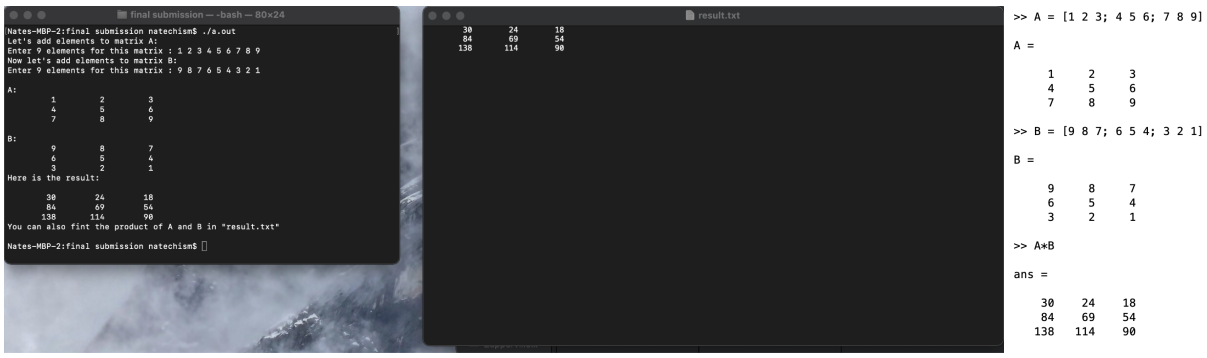
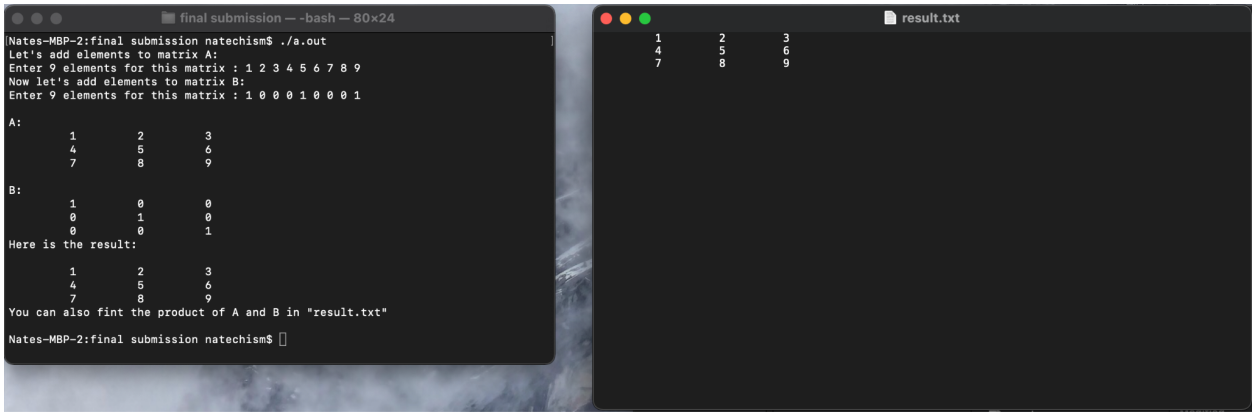
For part 2 of Lab 3 I wrote a program that prompts the user to enter values for two 3x3 matrices. The program then multiplies the two matrices by one another. Lines 64-74 of the file were coded directly using https://stackoverflow.com/questions/936687/how-do-i-declare-a-2d-array-in-c-using-new These lines declare and populate a 2-Dimensional array using pointer notation, meaning the array can be dynamically allocated. Passing these values as pointers also allows us to keep variable values when passing them to functions such as the mul_matrix() function. The resulting matrix is then written to the file result.txt. Below are several examples of my program being executed.



Here the example given in the problem prompt can be seen being executed. The resulting values agree with what was given in the problem.



Here I multiplied two matrices equal to one another. I ran this calculation in Matlab and got the same result (see right figure).



Lastly, I multiplied a matrix of the values 1 - 9 with the identity matrix. As expected, the matrix multiplied by the identity matrix returns itself, the original matrix A.