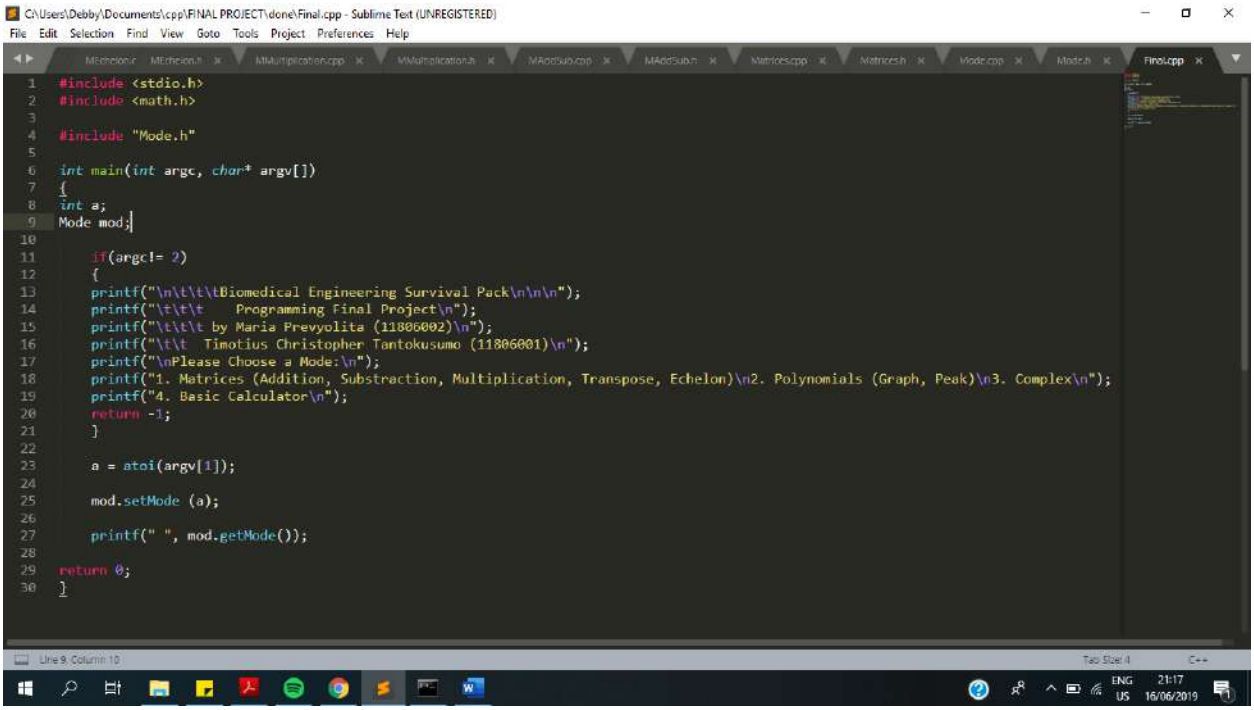
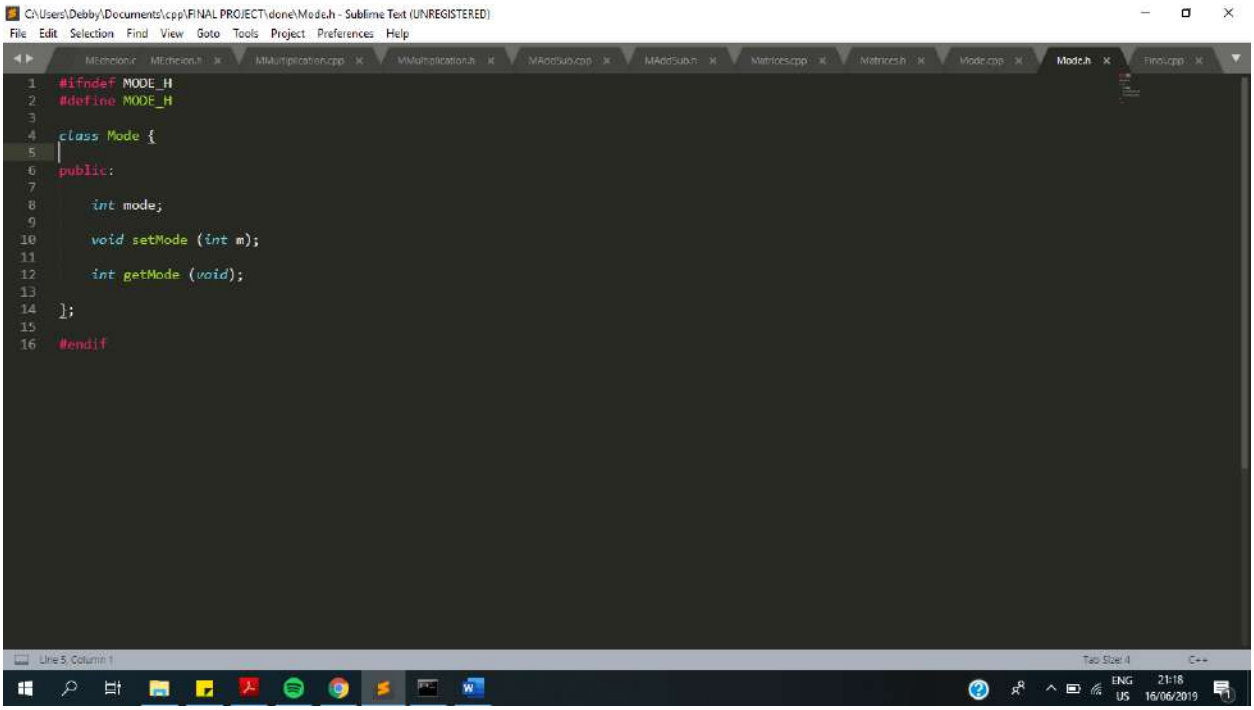
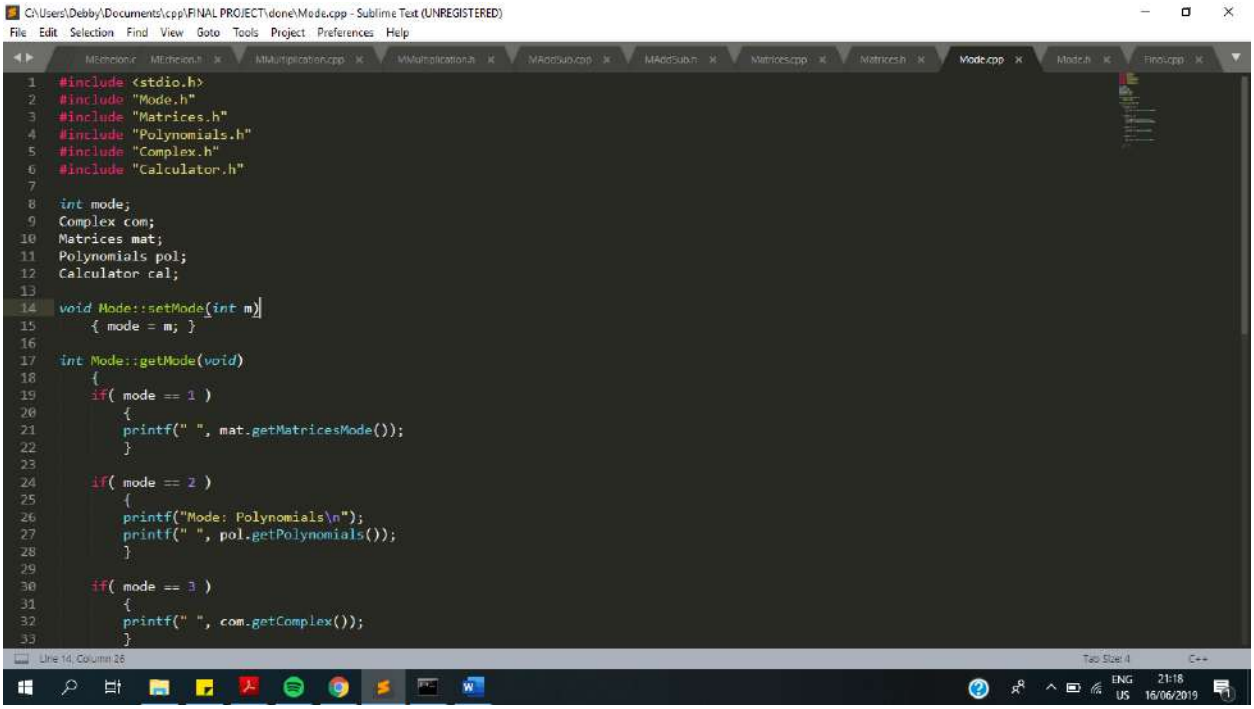
## Final.cpp



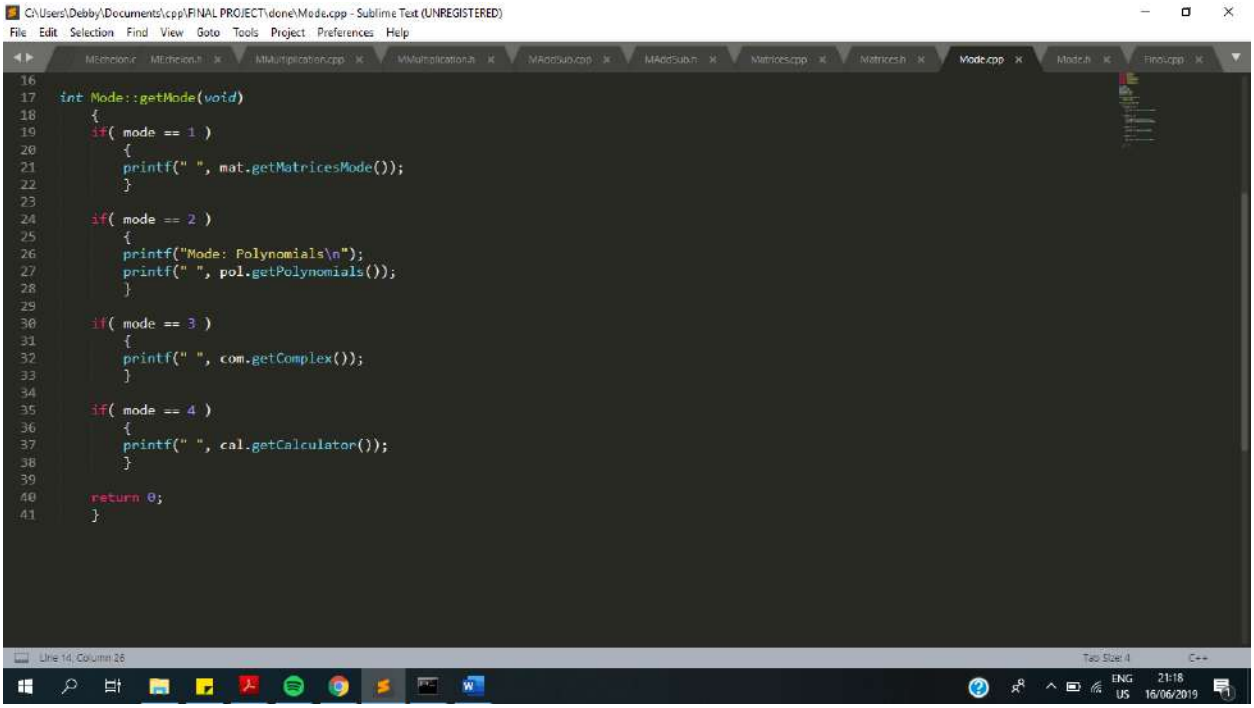

## Mode.h



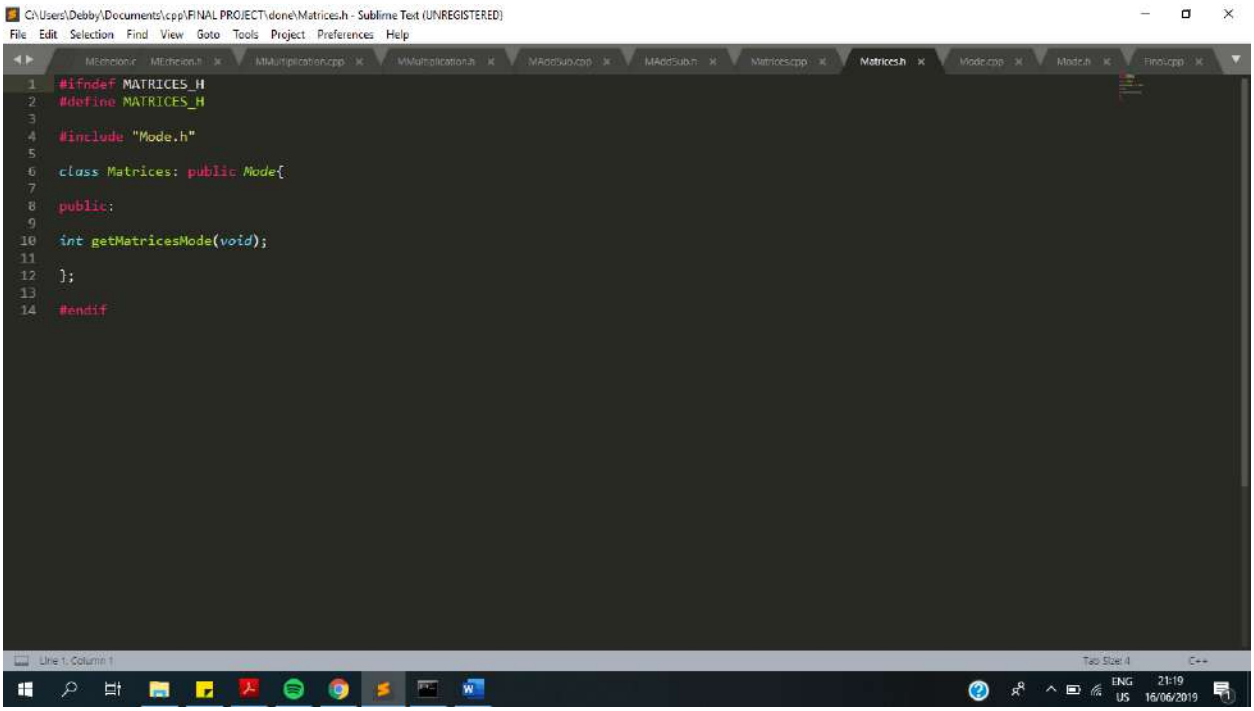
## Mode.cpp (I)



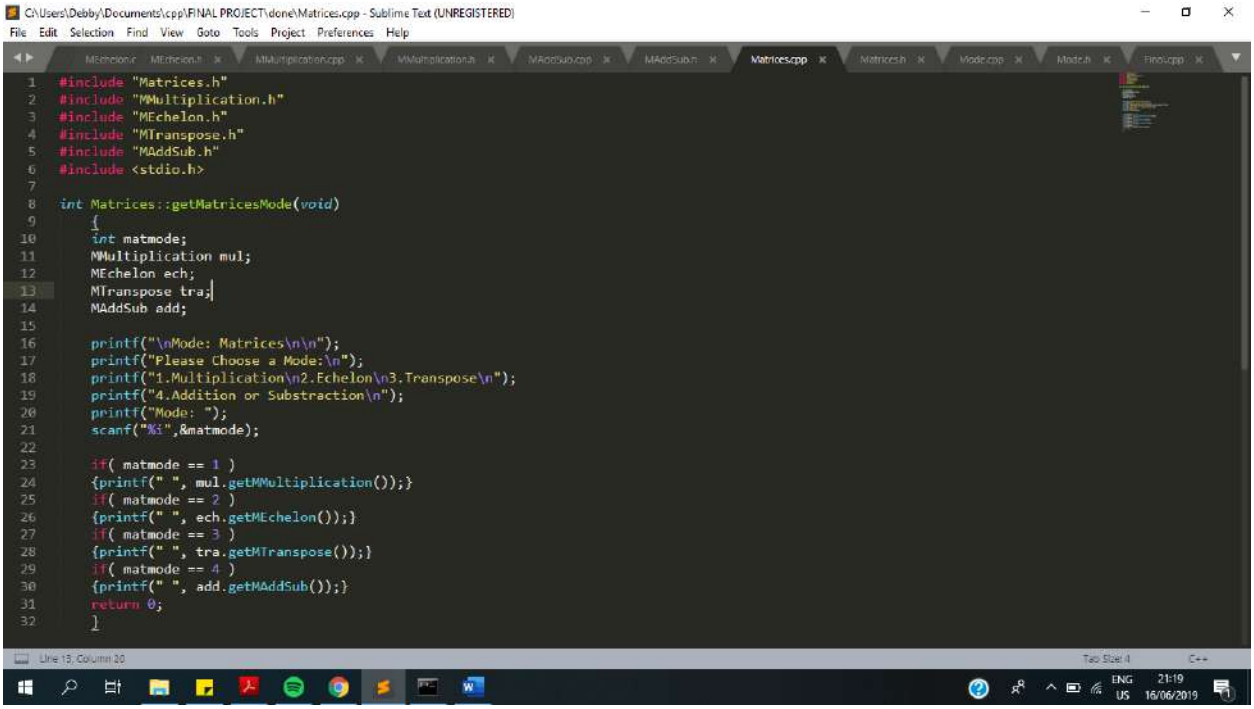

## Mode.cpp (II)



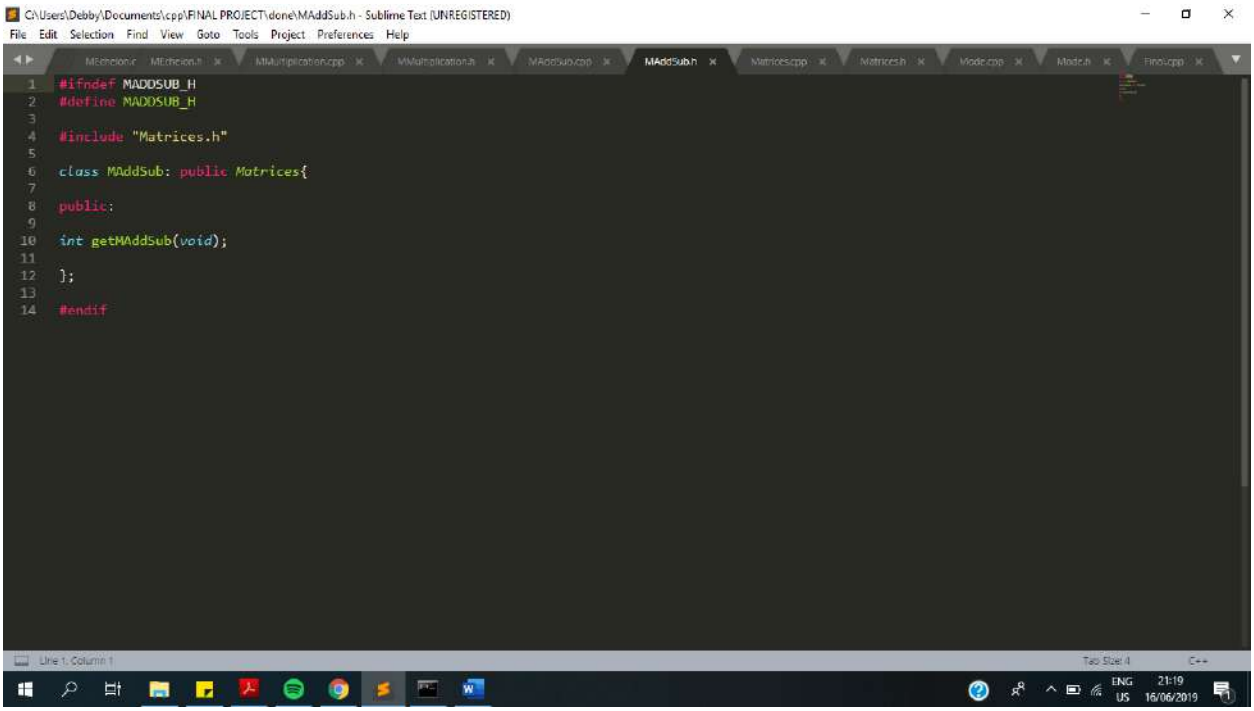
## Matrices.h



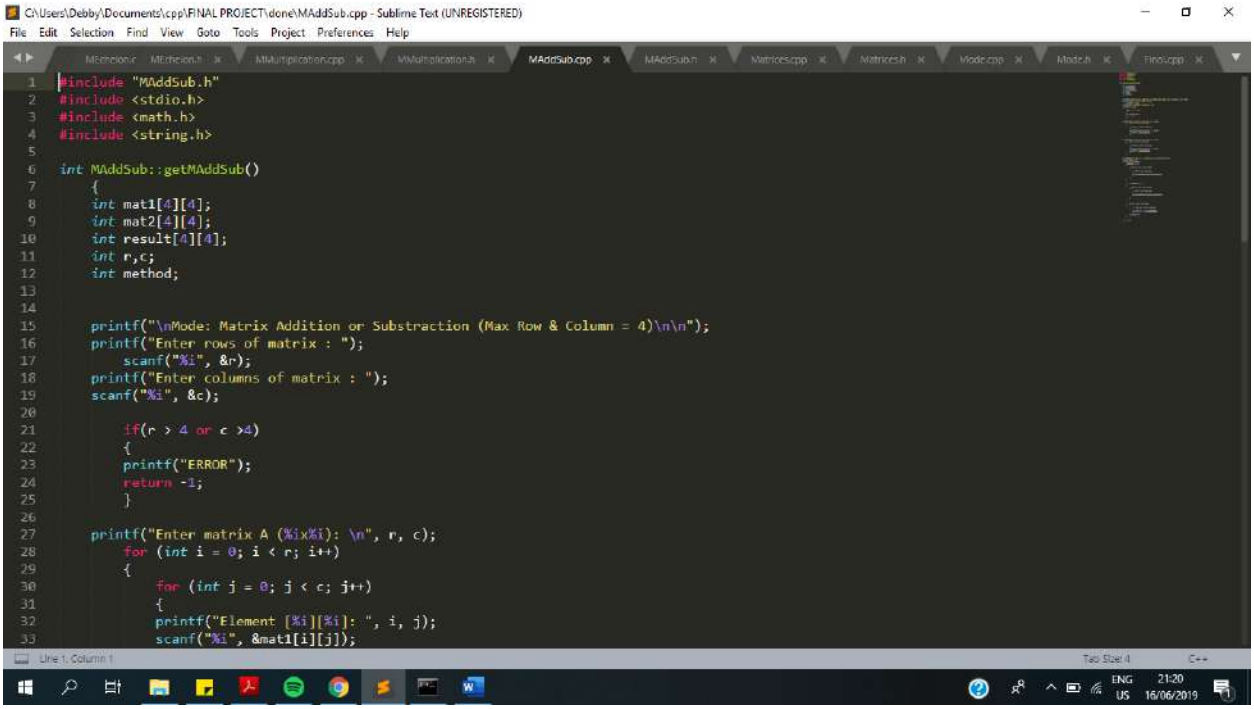

## Matrices.cpp



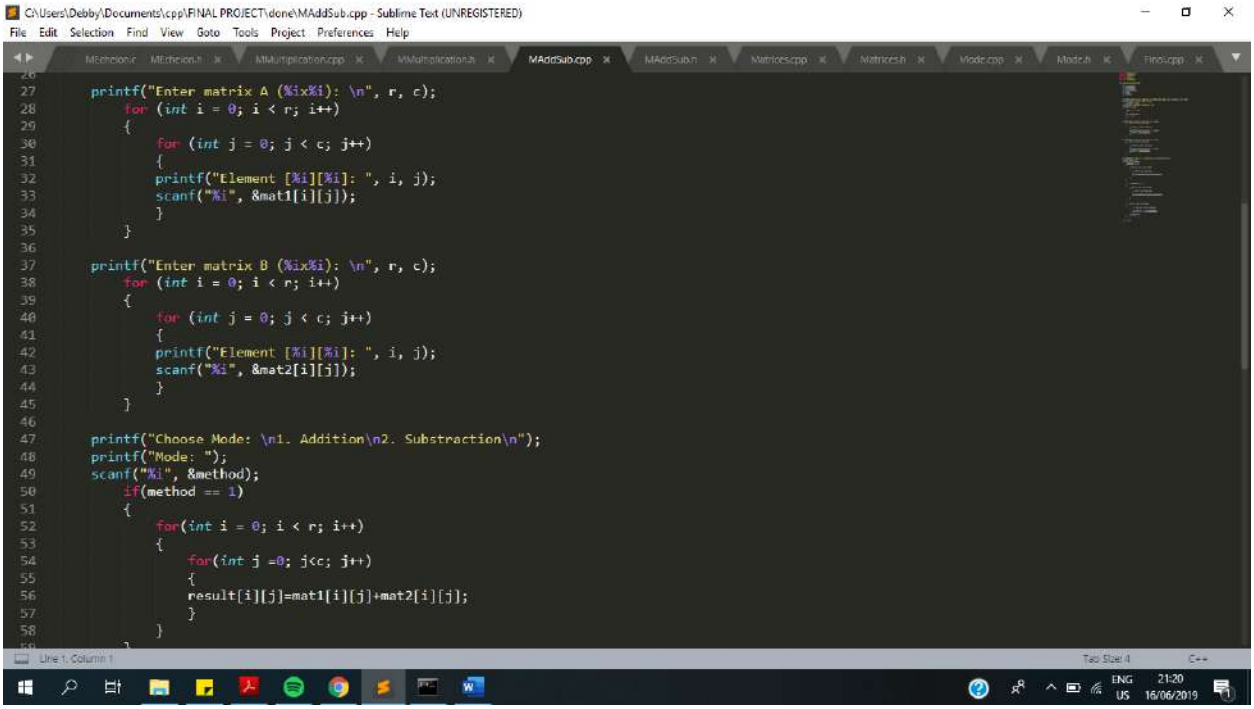
## MAddSub.h



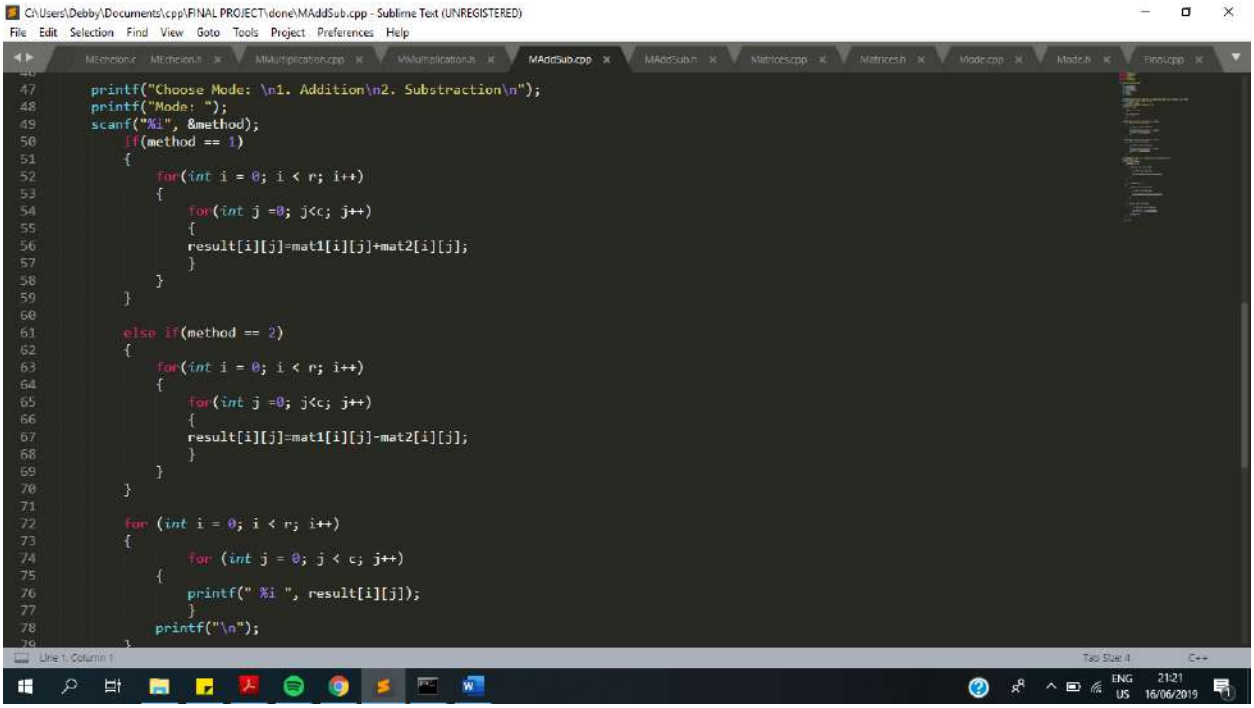

## MAddSub.cpp (I)



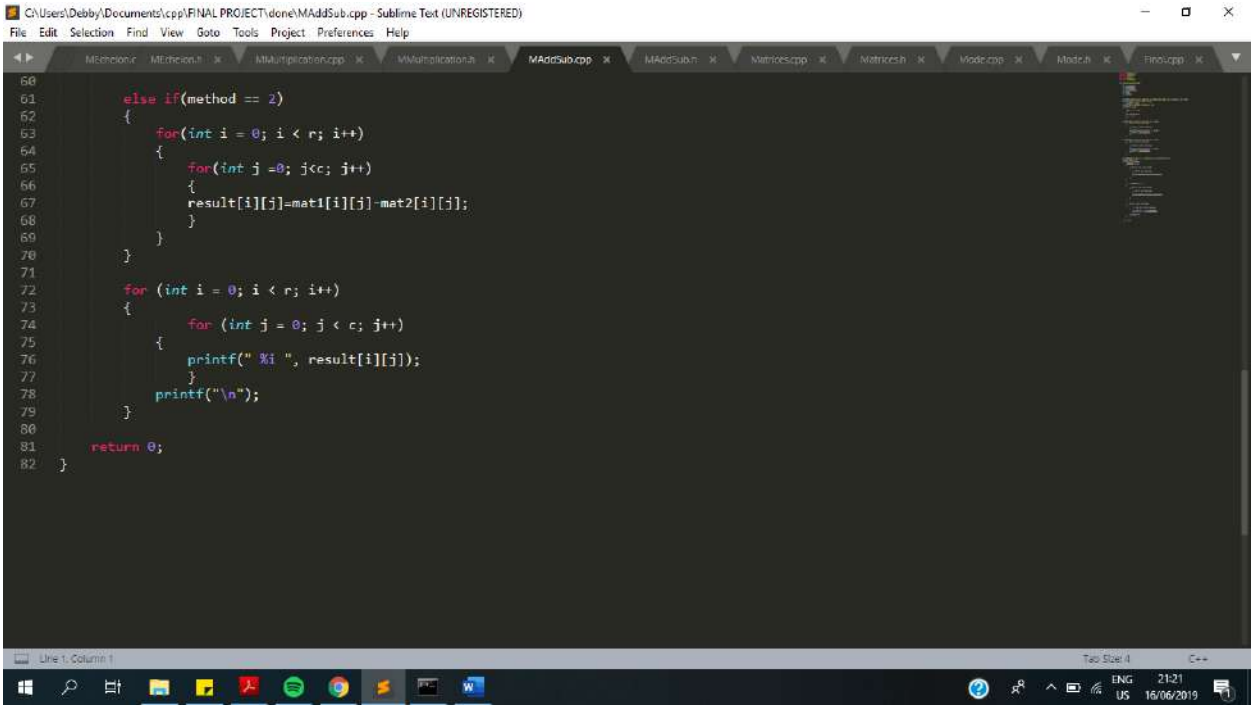
## MAddSub.cpp (II)



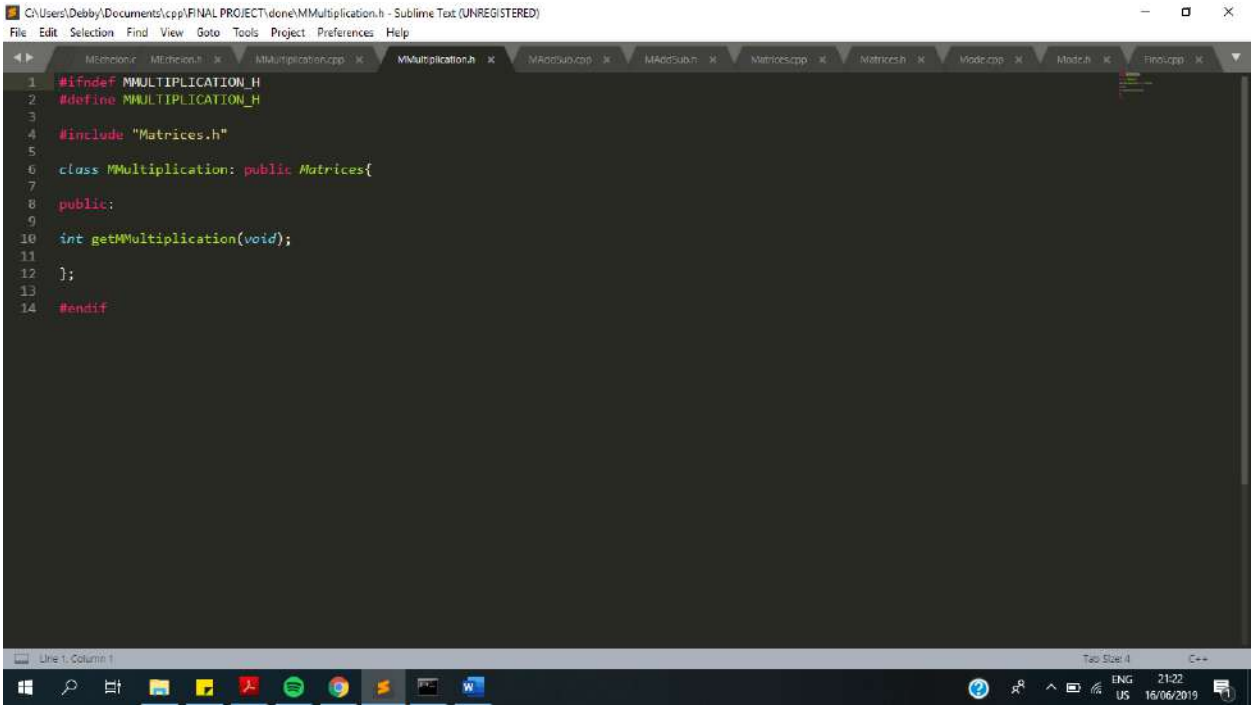

## MAddSub.cpp (III)



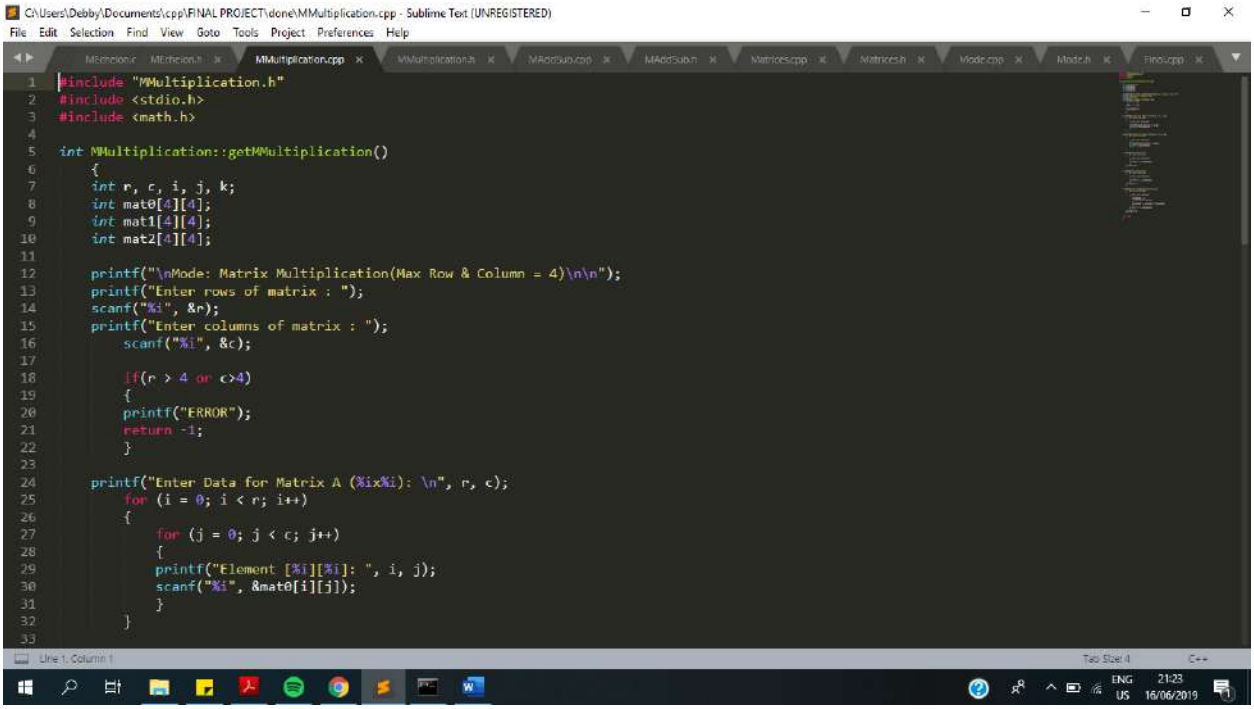
## MAddSub.cpp (IV)



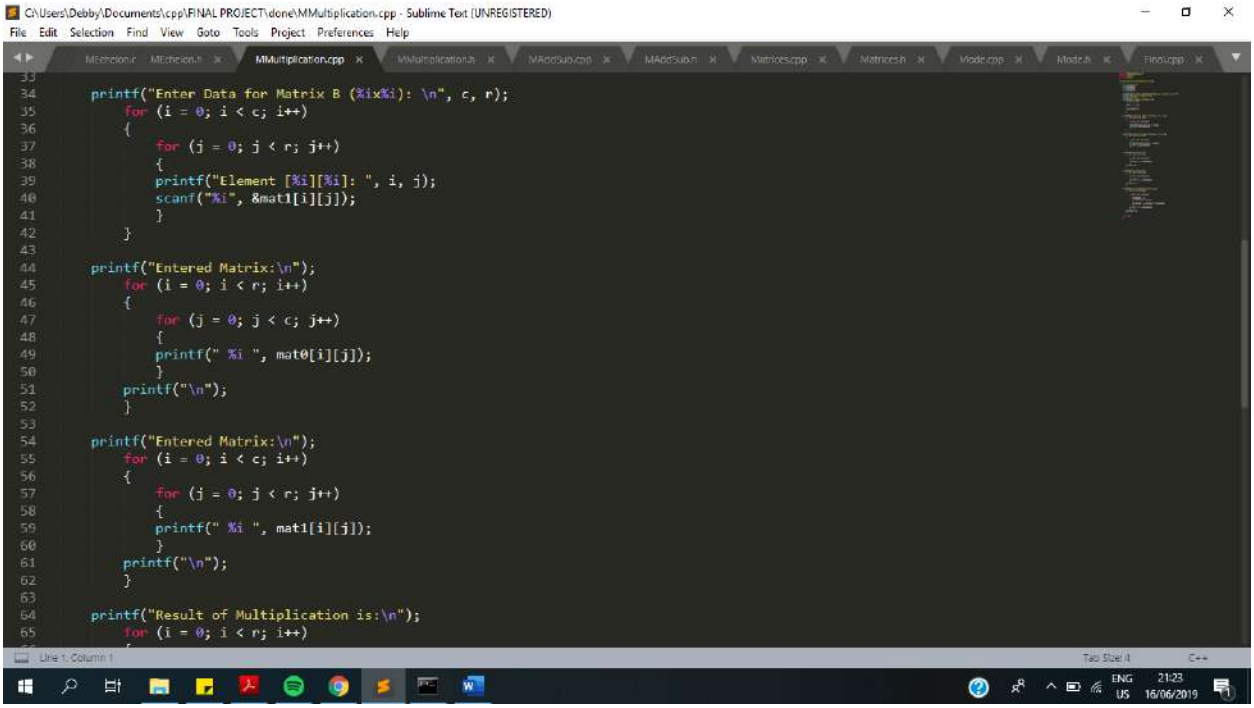

## MMultiplication.h



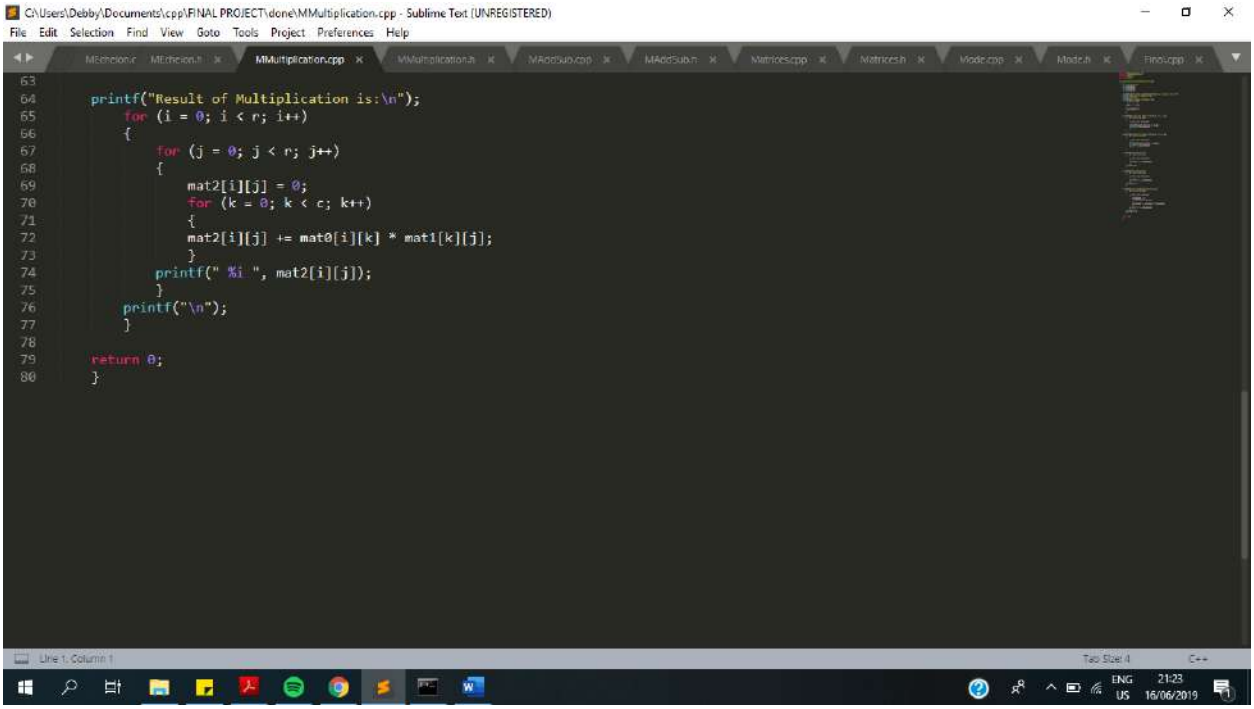
## MMultiplication.cpp (I)



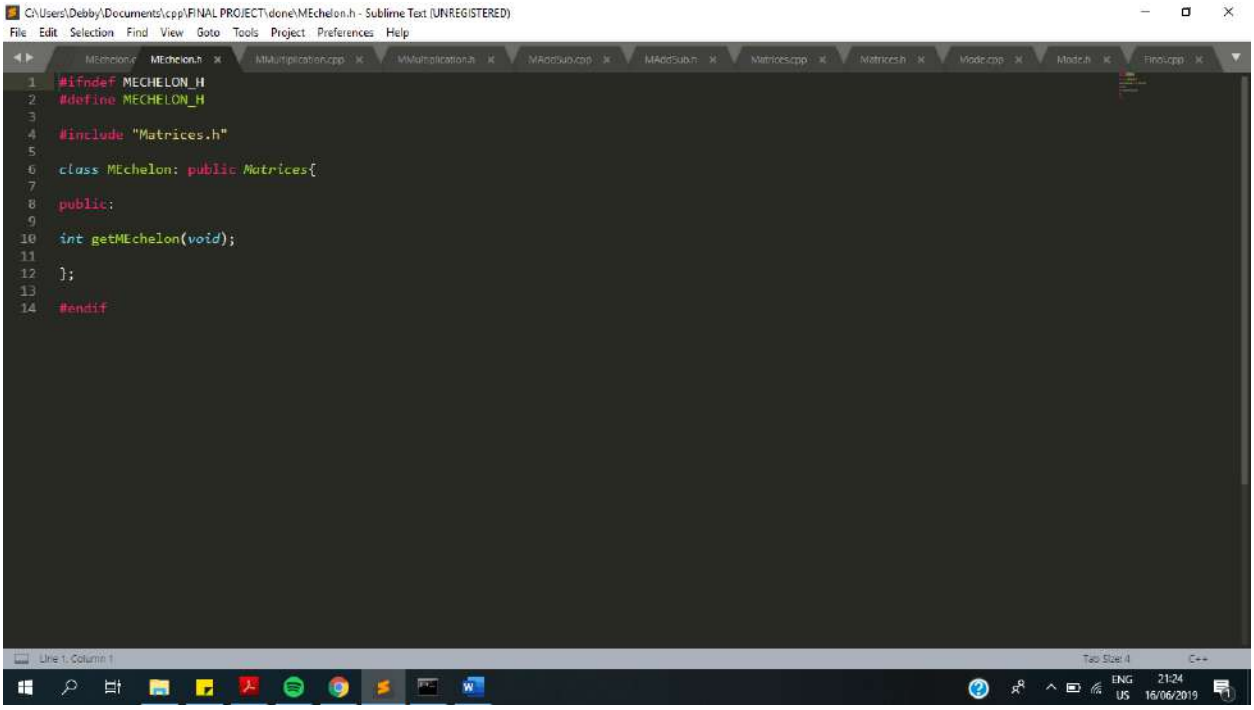

## MMultiplication.cpp (II)



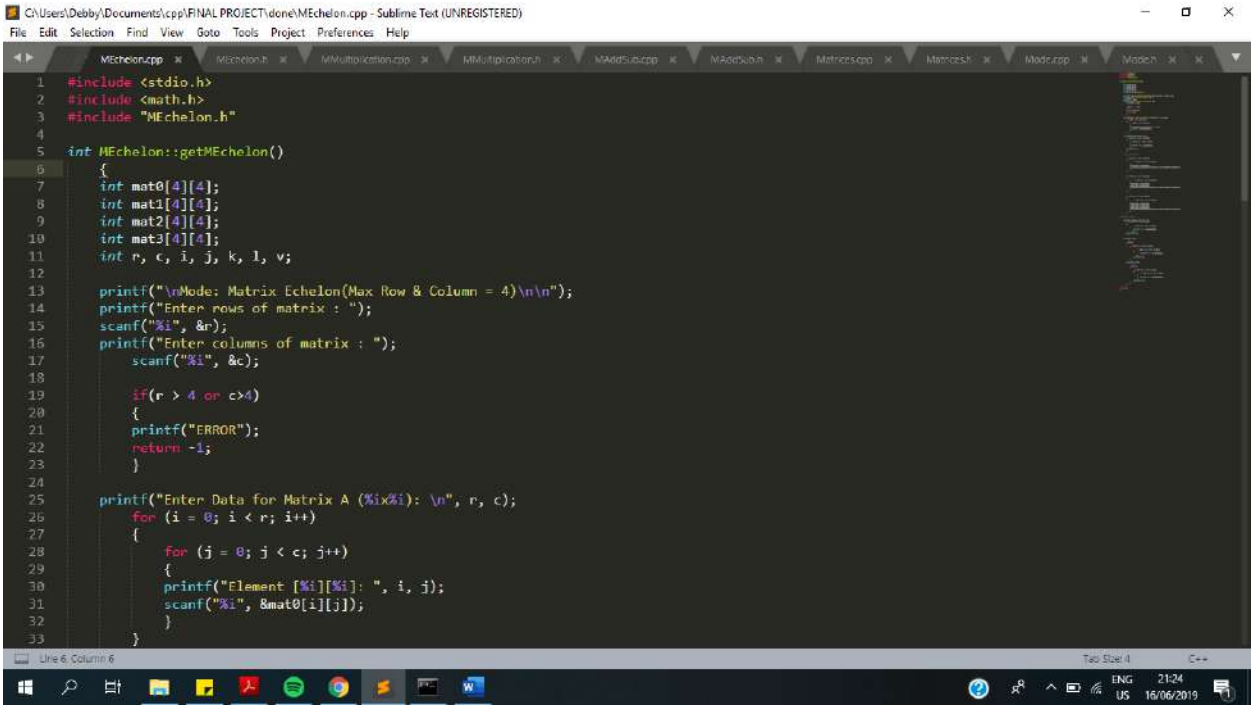
## MMultiplication.cpp (III)




## MEchelon.h

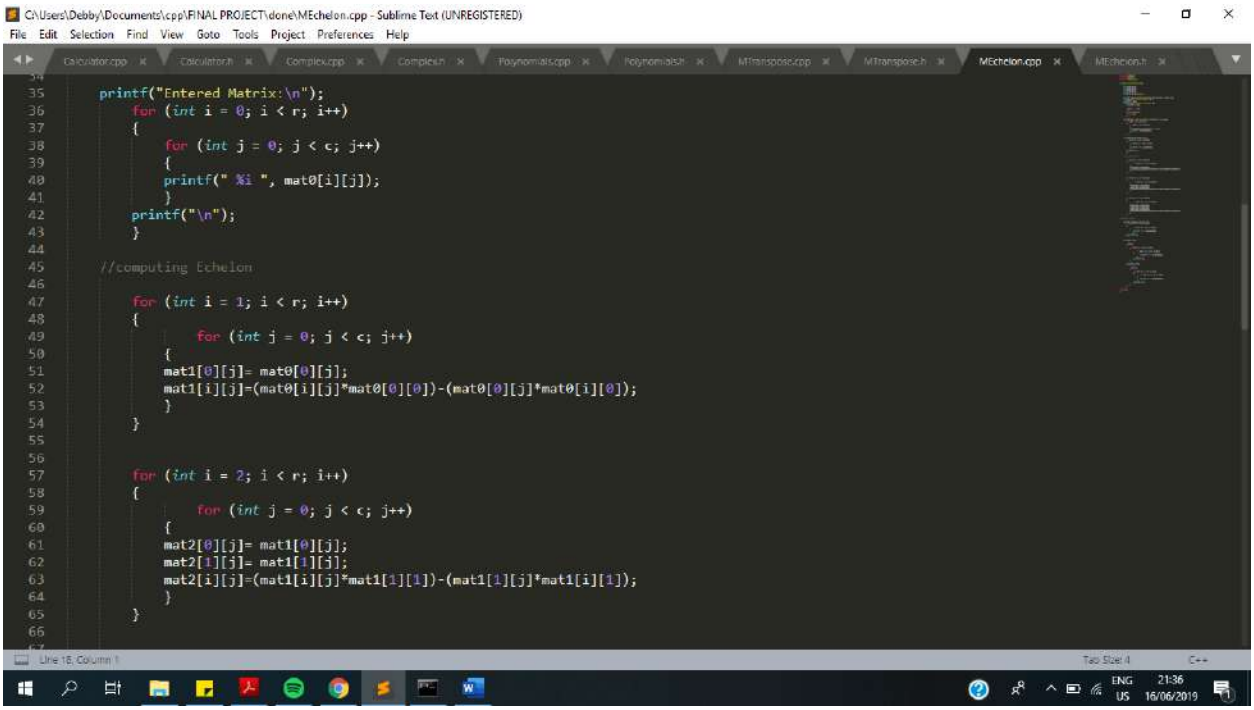


## MEchelon.cpp (I)



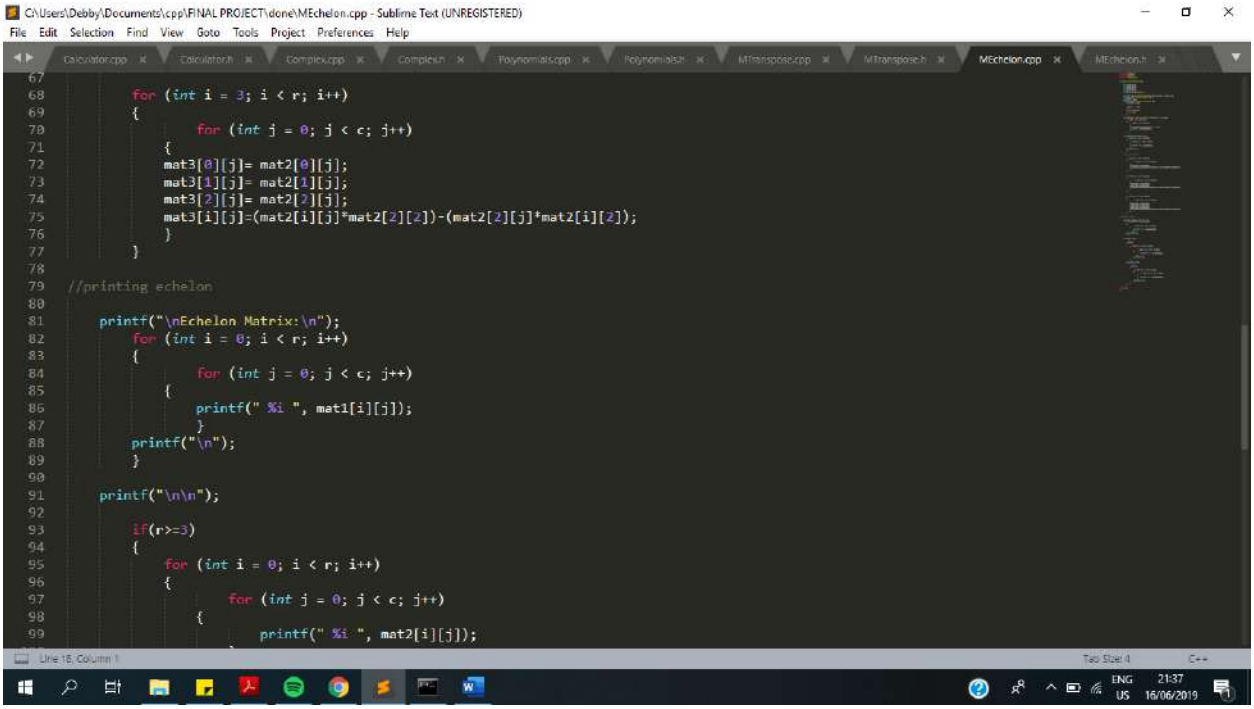
```
#include <stdio.h>
#include <math.h>
#include "MEchelon.h"

int MEchelon::getMEchelon()
    {
    int mat0[4][4];
    int mat1[4][4];
    int mat2[4][4];
    int mat3[4][4];
    int r, c, i, j, k, l, v;

    printf("\nMode: Matrix Echelon(Max Row & Column = 4)\n\n");
    printf("Enter rows of matrix : ");
    scanf("%i", &r);
    printf("Enter columns of matrix : ");
        scanf("%i", &c);

        if(r > 4 or c>4)
        {
        printf("ERROR");
        return -1;
        }

    printf("Enter Data for Matrix A (%ix%i): \n", r, c);
        for (i = 0; i < r; i++)
        {
            for (j = 0; j < c; j++)
            {
            printf("Element [%i][%i]: ", i, j);
            scanf("%i", &mat0[i][j]);
            }
        }
```

## MEchelon.cpp (II)

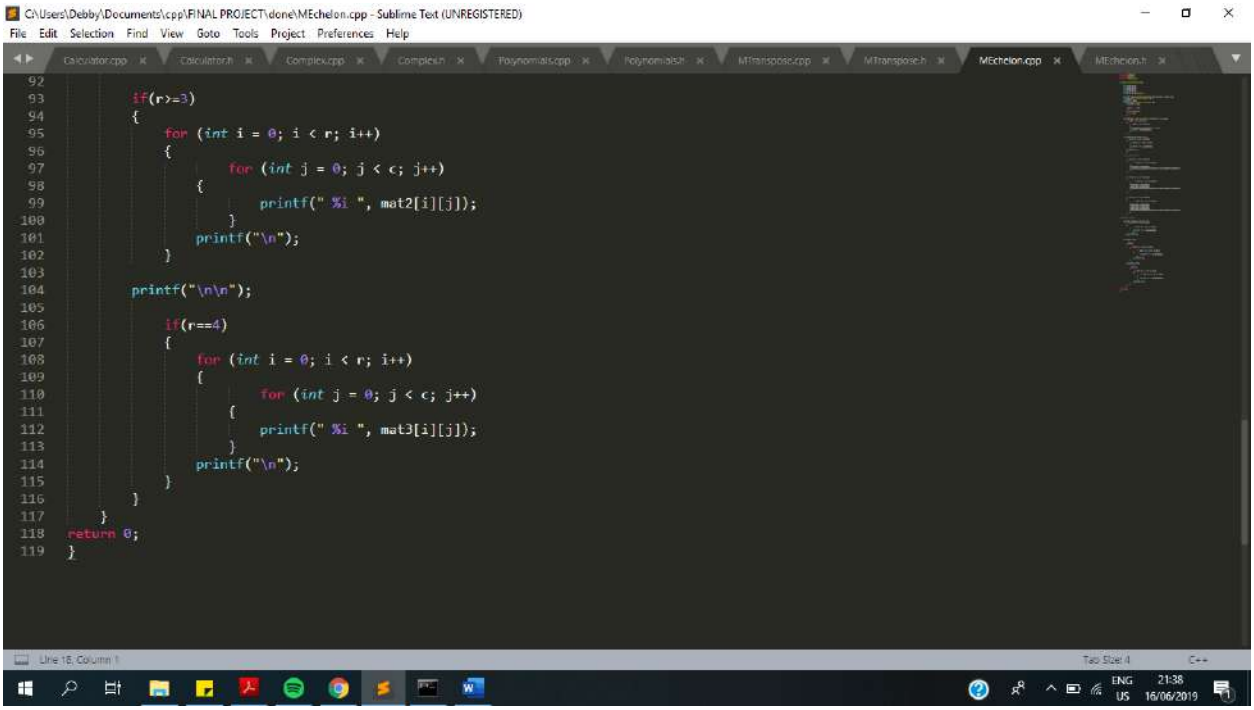


```
    printf("Entered Matrix:\n");
        for (int i = 0; i < r; i++)
        {
            for (int j = 0; j < c; j++)
            {
            printf(" %i ", mat0[i][j]);
            }
        printf("\n");
        }

    //computing Echelon

        for (int i = 1; i < r; i++)
        {
                for (int j = 0; j < c; j++)
            {
            mat1[0][j]= mat0[0][j];
            mat1[i][j]=(mat0[i][j]*mat0[0][0])-(mat0[0][j]*mat0[i][0]);
            }
        }


        for (int i = 2; i < r; i++)
        {
                for (int j = 0; j < c; j++)
            {
            mat2[0][j]= mat1[0][j];
            mat2[1][j]= mat1[1][j];
            mat2[i][j]=(mat1[i][j]*mat1[1][1])-(mat1[1][j]*mat1[i][1]);
            }
        }
```

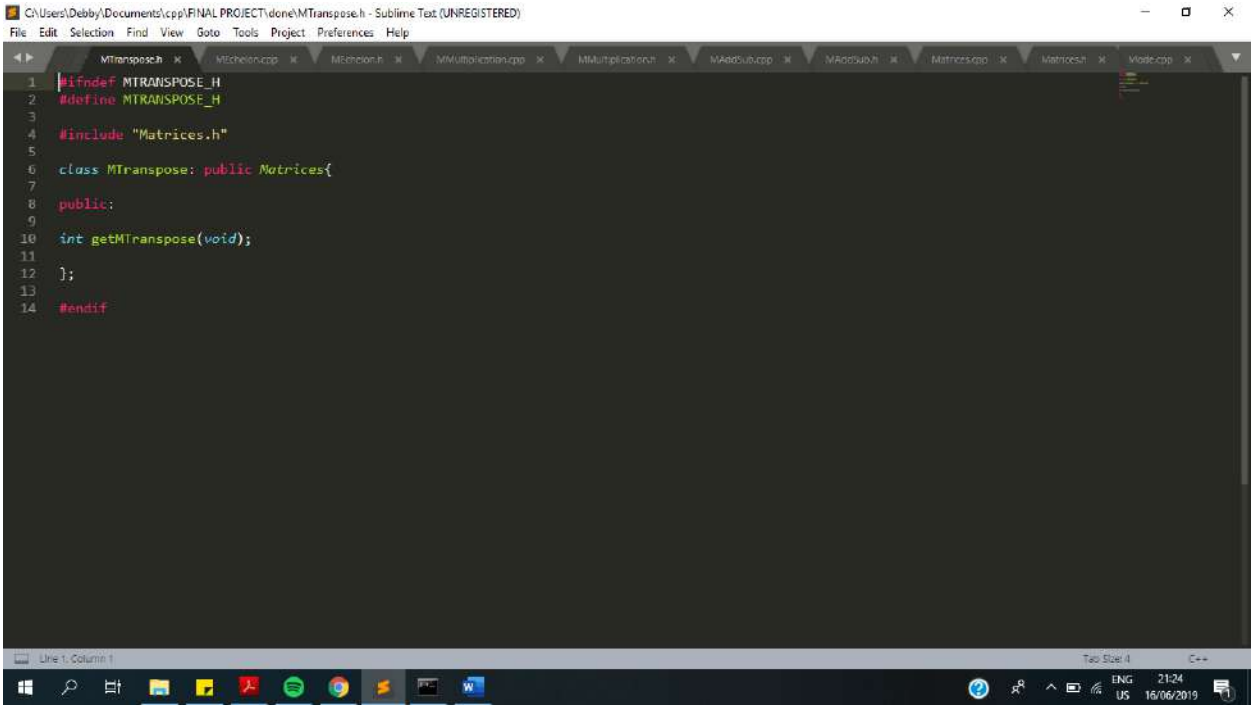
## MEchelon.cpp (III)



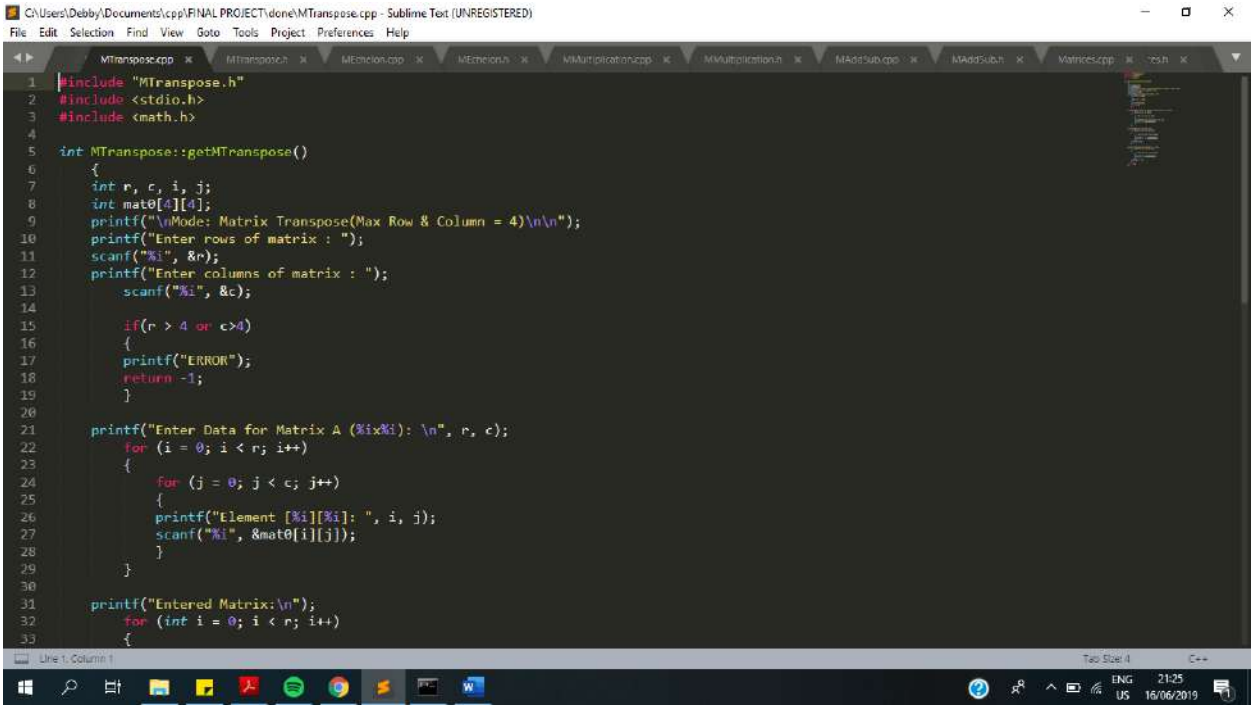

## MEchelon.cpp (IV)



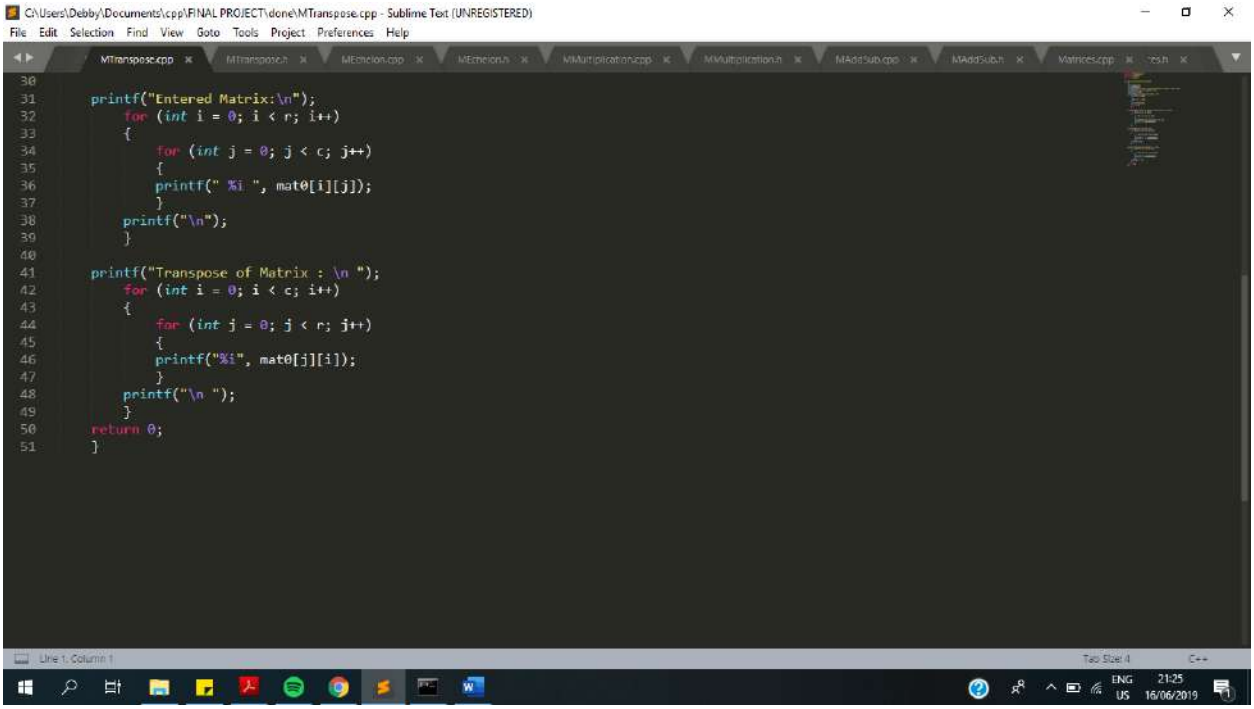
## MTranspose.h



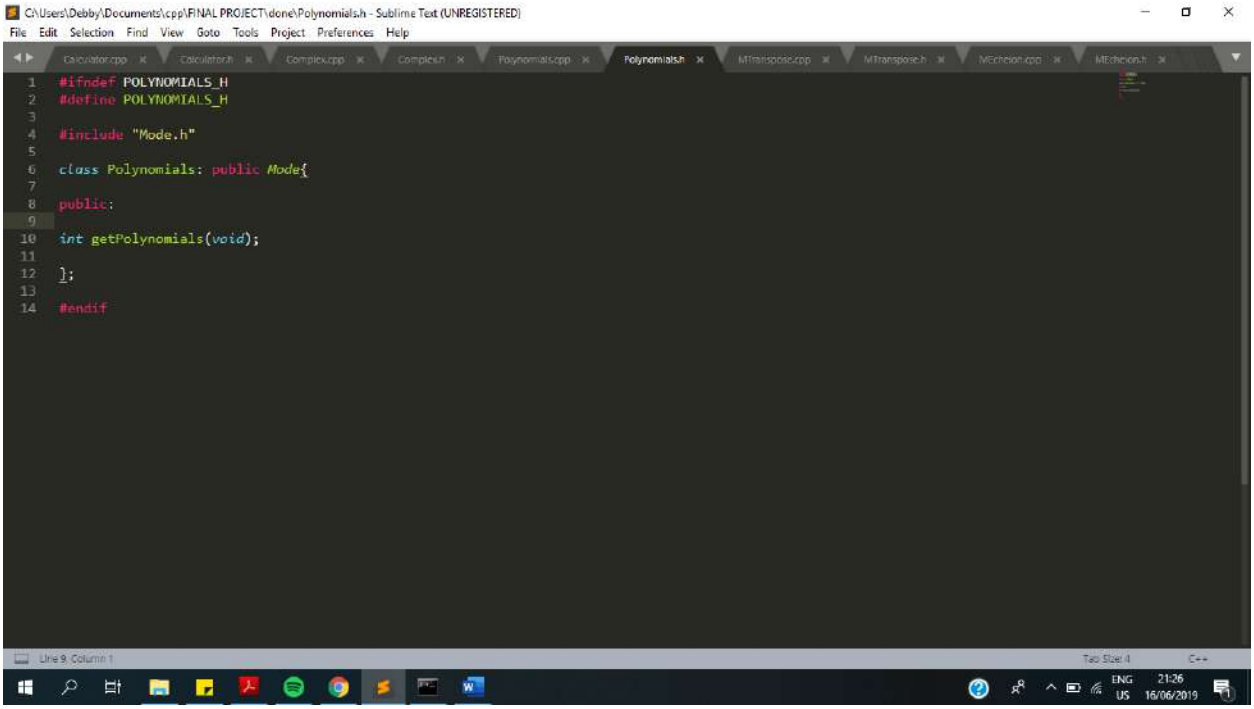

## MTranspose.cpp (I)



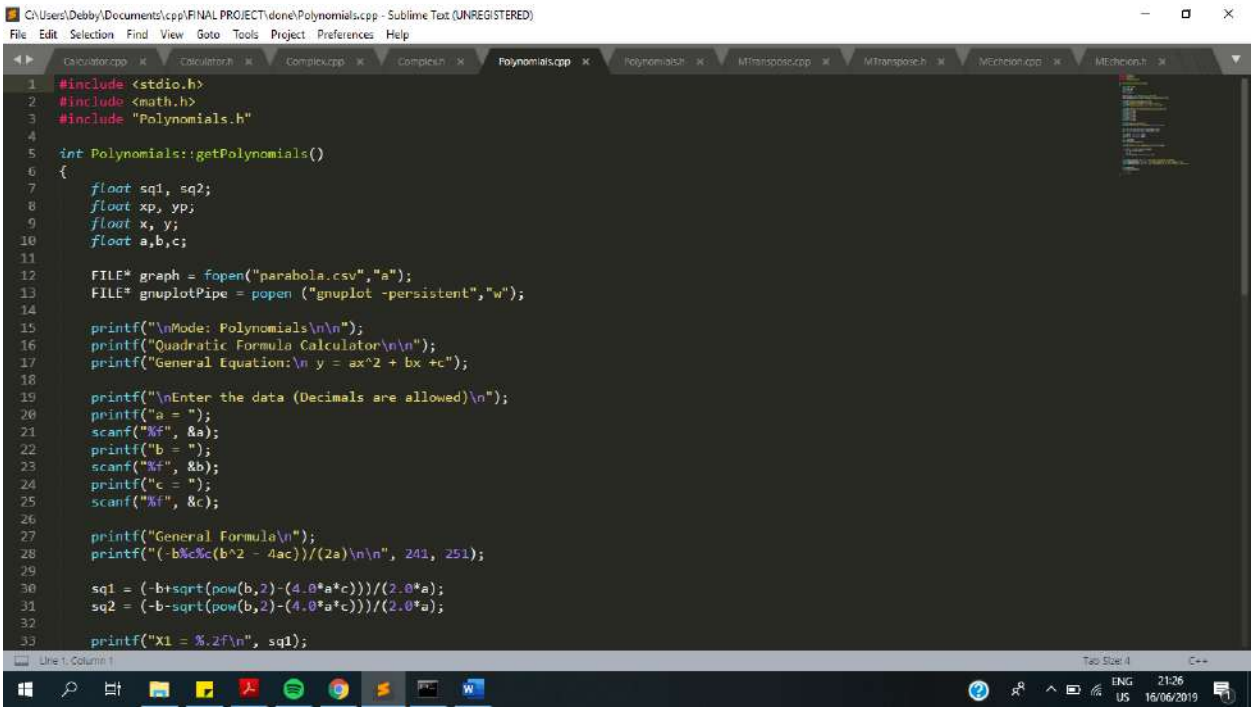
## MTranspose.cpp (II)



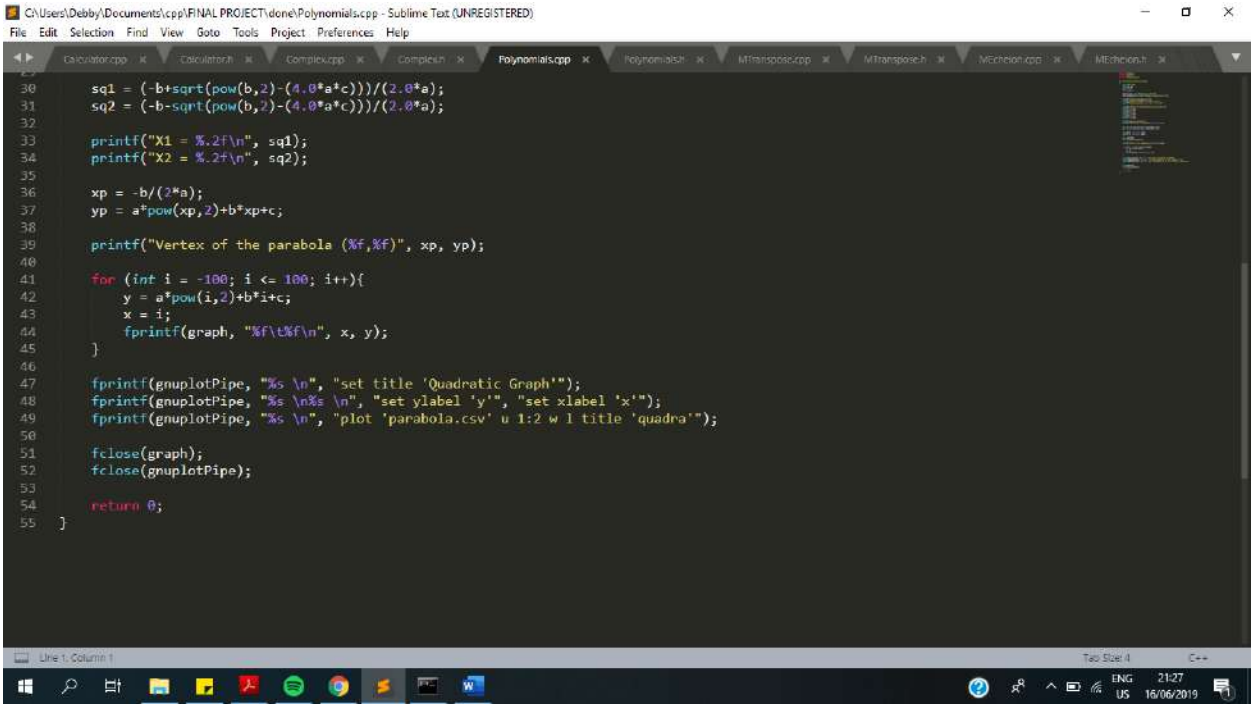

## Polynomials.h



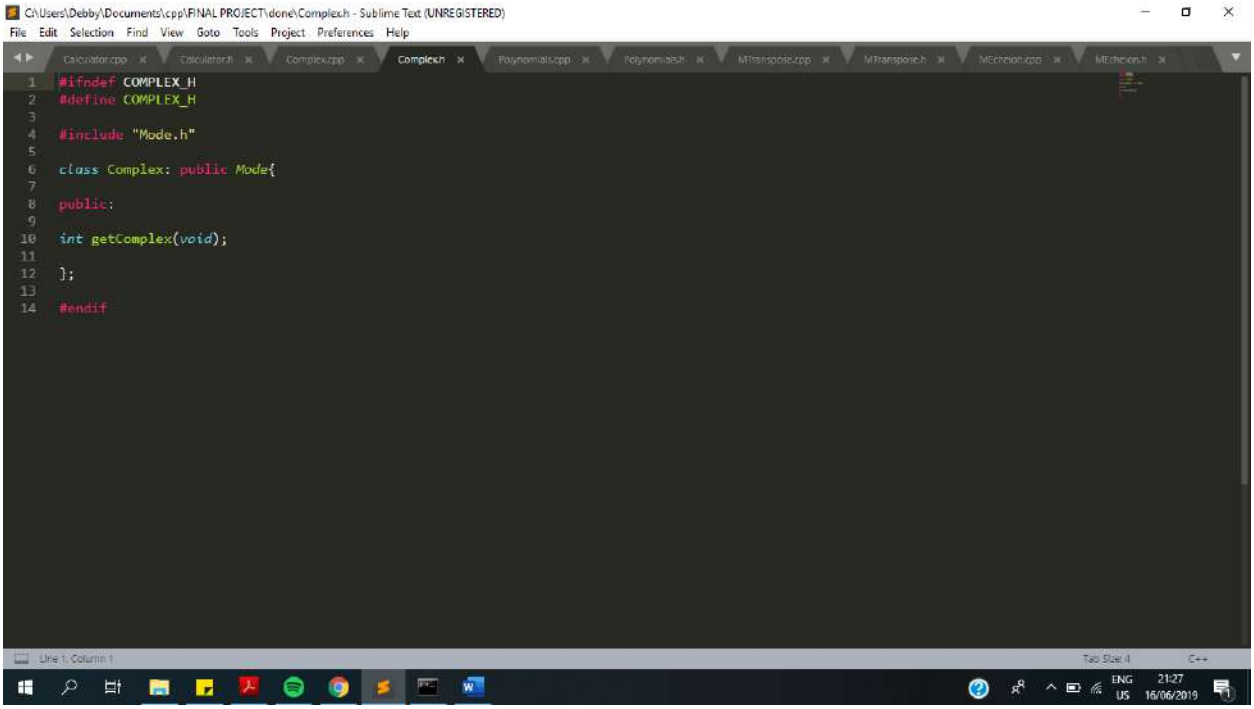
## Polynomials.cpp (I)



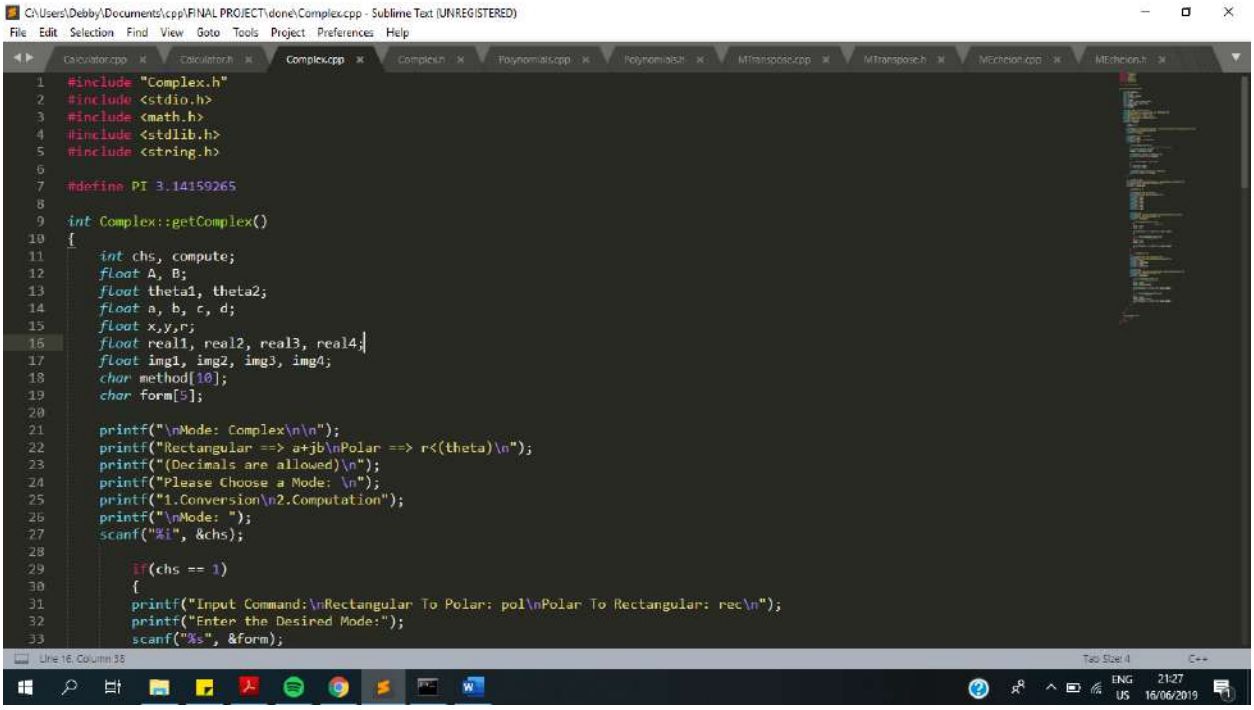

## Polynomials.cpp (II)



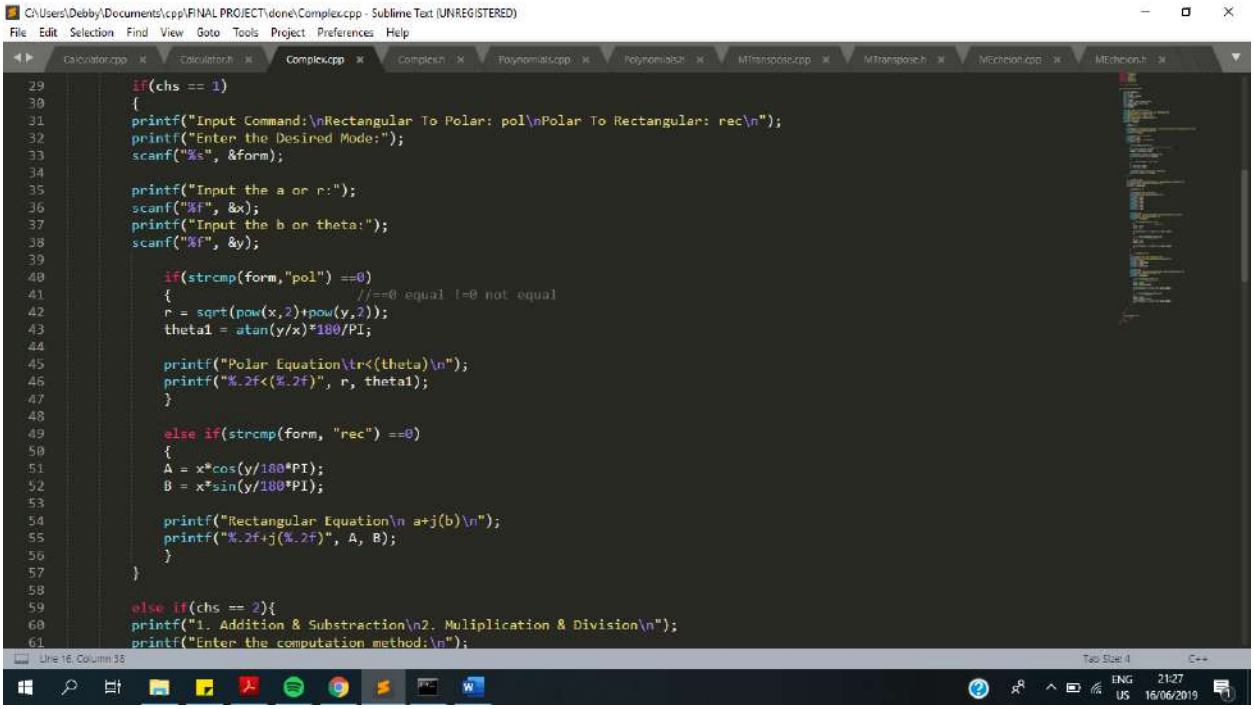
## Complex.h



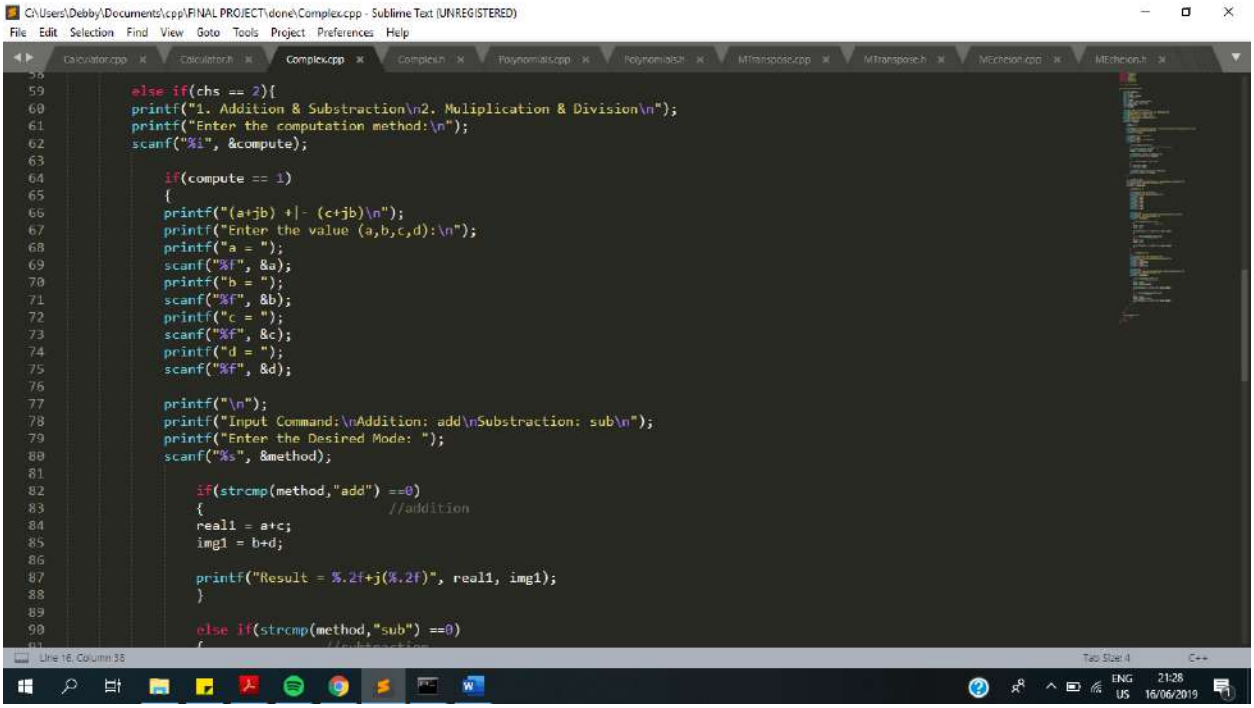

## Complex.cpp (I)



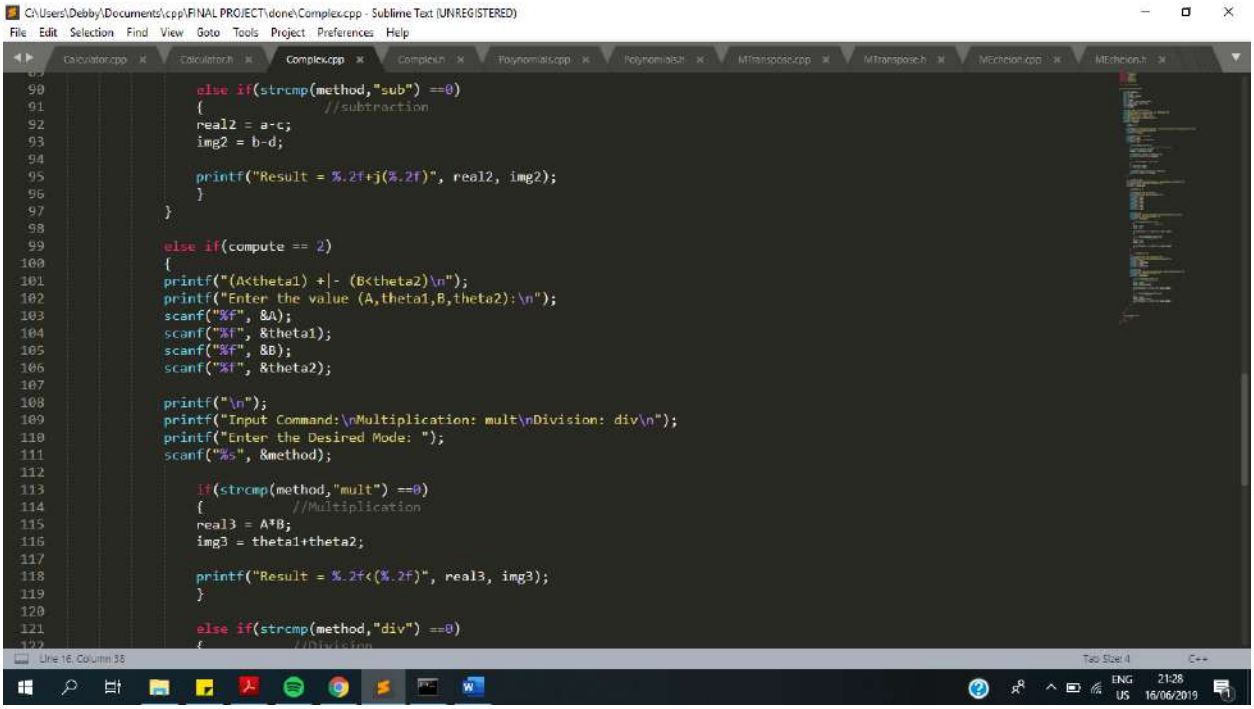
## Complex.cpp (II)



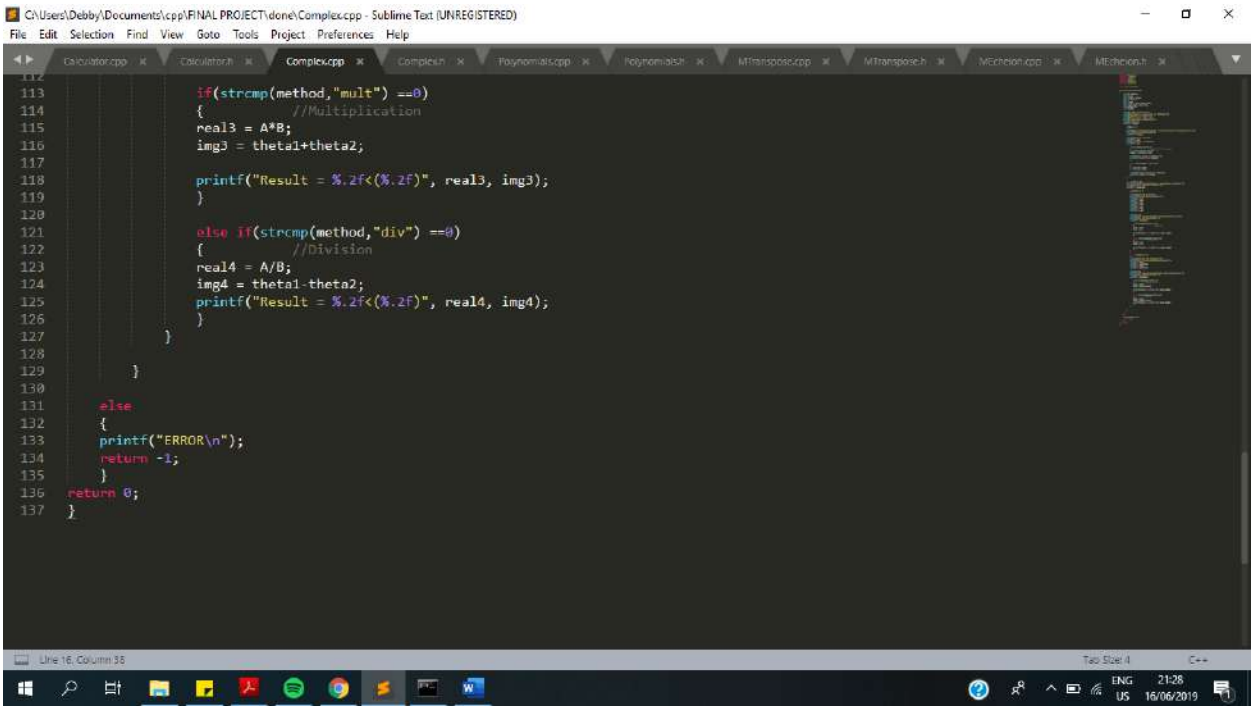

## Complex.cpp (III)



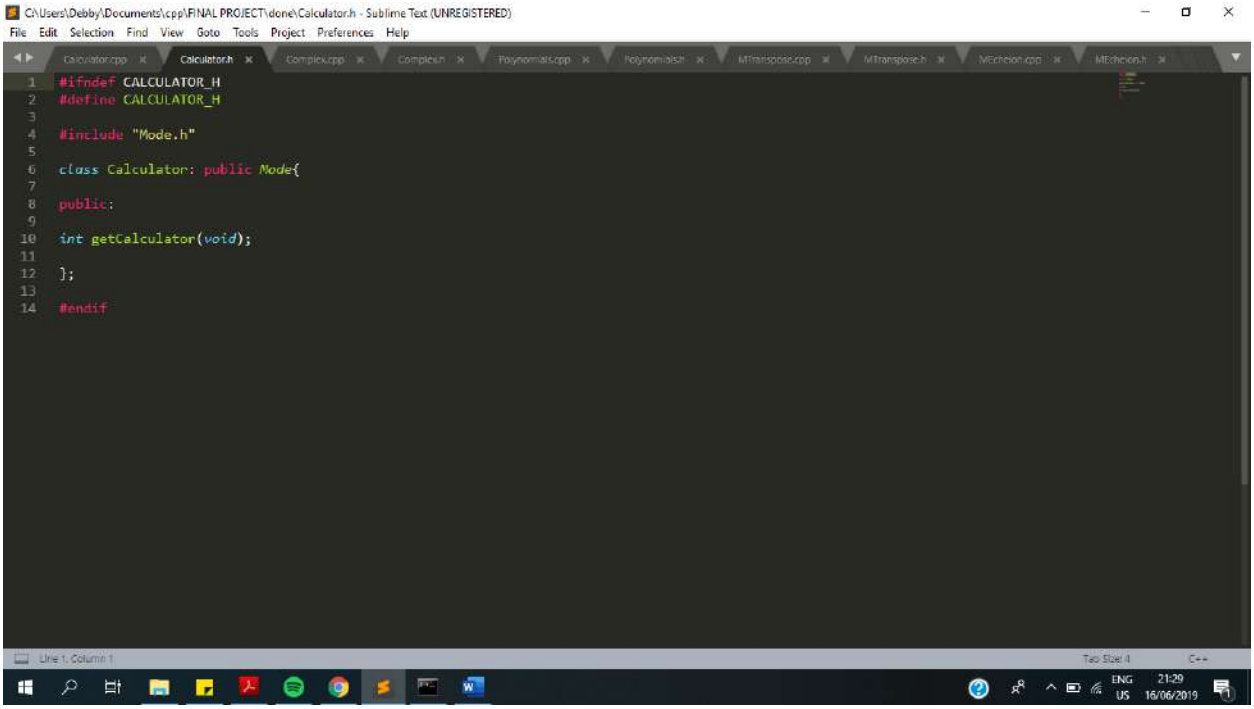
## Complex.cpp (IV)



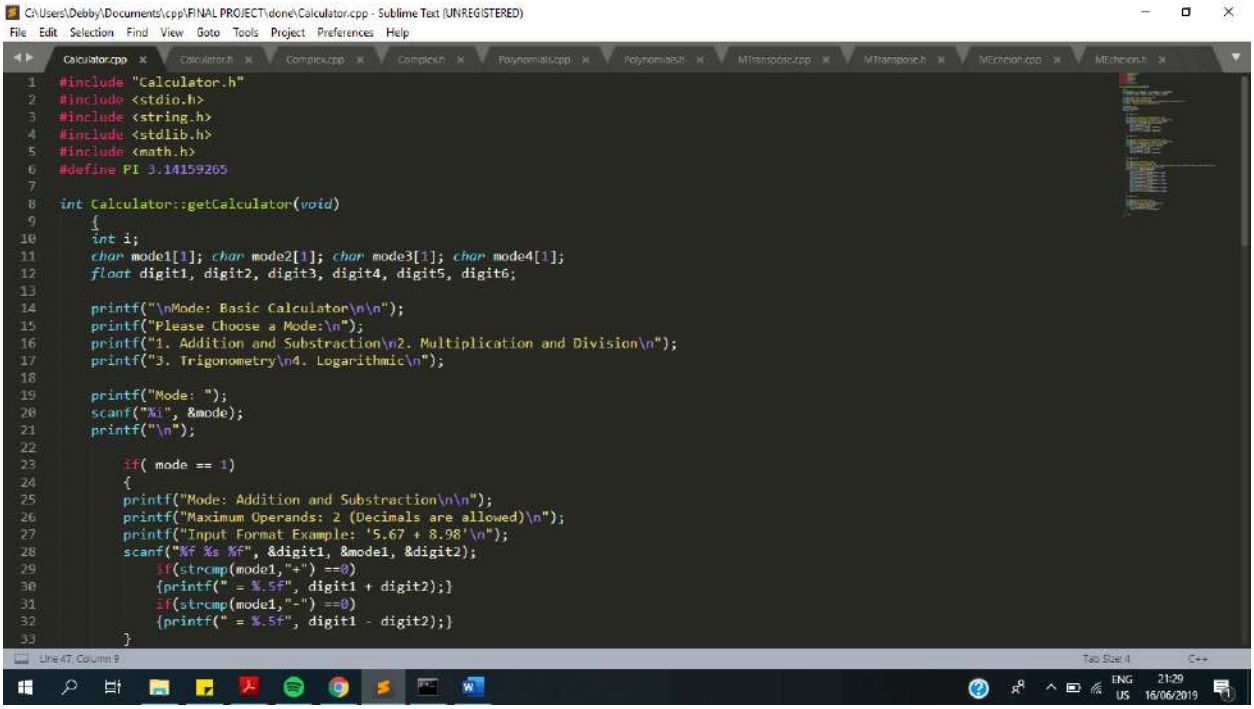

## Complex.cpp (V)



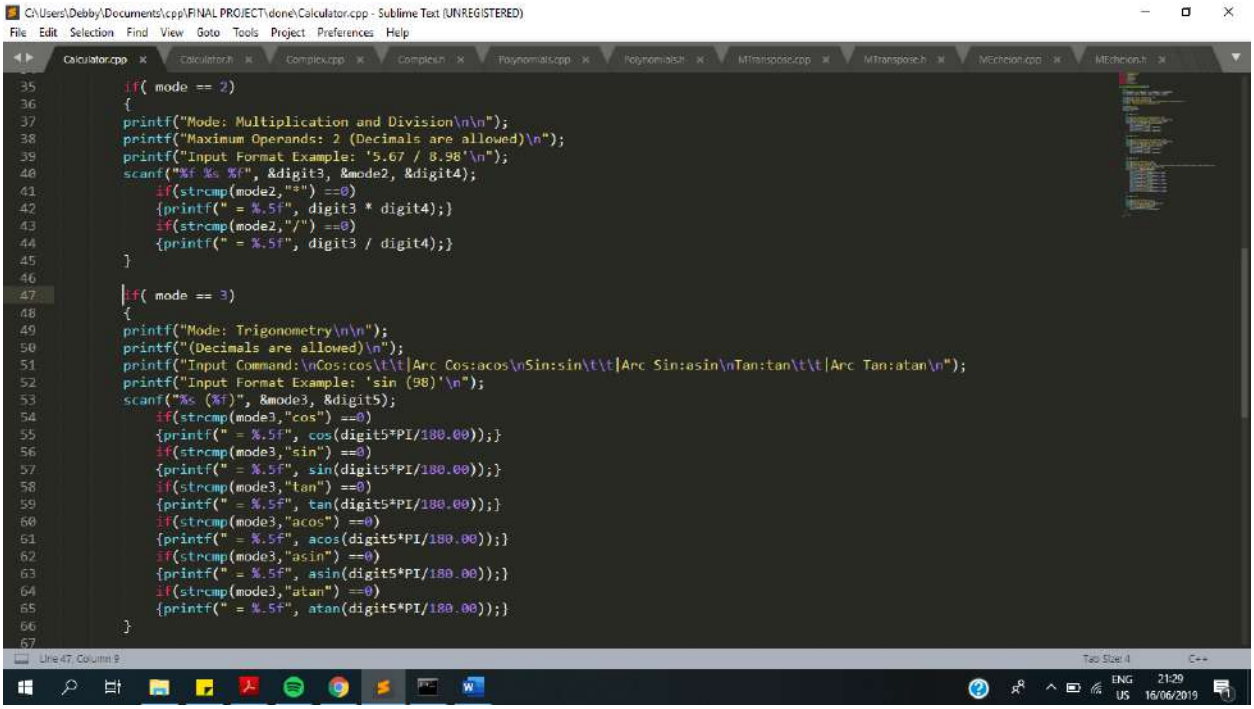
## Calculator.h




## Calculator.cpp (I)



## Calculator.cpp (II)




## Calculator.cpp (III)