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//MAE 5150: Coding Project 2
//Max Le
//MAIN PROGRAM
#include <stdio.h>
#include <math.h>
#include <iostream>
#include <vector>
#include <cmath>
#include <fstream>
#include "CFD_PROJECT2_HEADERS.h"
#include <ctime>
using namespace std;
float wi;//dummy variable to test W later on

int main(){

    //CALL POINT GAUSS SEIDEL
    Elliptic PGS;
    InitializePsi(&PGS,wi);
    PointGaussSeidel(&PGS);

    //CALL LINE GAUSS SEIDEL
    Elliptic LGS;
    InitializePsi(&LGS,wi);
    LineGaussSeidel(&LGS);

    // //CALL POINT SOR AT OPTIMUM VALUE OF W
    // {
    //     float wi = 1.801;
    //     Elliptic PSOR;
    //     InitializePsi(&PSOR,wi);
    //     PointSOR(&PSOR);
    // }

    // //CALL LINE SOR AT OPTIMUM VALUE OF W
    // {
    //     float wi = 1.3;
    //     Elliptic LSOR;
    //     InitializePsi(&LSOR,wi);
    //     LineSOR(&LSOR);
    // }

    //CALL THIS FUNCTION TO SHOW TABLES OF W VS. ITERATION
    //IF CALL THIS FUNCTION, THEN COMMENT OUT THE INDIVIDUAL PSOR/LSOR AT
    OPTIMUM W
    // PrintTablesAndCompare();
    return 0;
}
//END MAIN PROGRAM

```