```
//================================== CREATE INITIAL PROFILE
#include "global.h"
#include <stdio.h>
void init(const int W, double T[W+1][W+2], double E[W+1][W+1], double
p[W+1][W+1]){
        // for nodes and boundaries
        for(int i = 0; i <= M+1; i++){
                for(int j = 0; j<= M+1; j++){
                        // Temperatures
                        T[i][j] = T0; // IC's
                        // Energies and liquid fractions
                        if(i > 0 && j > 0 && i < M+1 && j < M+1){ //
NODES ONLY
                                E[i][j] = rho*Cs*(T[i][j] - Tm);
                                p[i][j] = 0;
                        }
                }
        }
}
```