```
#include "global.h"
#include <math.h>
#include <stdio.h>
void BCFlux(double F0[]){
        // creates a flux vector that holds value at each node
        // corresponding to gaussian distribution
        FILE * OUT;
        OUT = fopen("outputs/flxdst.o", "w"); // output flux
distribution

        double x;
        double center = 0.5*(b-a); // location of peak
        double scale = 5/(b); // will look like gaussian of 5 max
        double stddev = 1/(scale*sqrt(2*pi)); // width of flux
        for(int i = 1; i <= M; i++){ // for every node
                x = a + ((double)i - 0.5)*dx; // location of current
node
                if(!FType){ // Gaussian distribution
                        F0[i] = Q0*exp( -(x - center)*(x - center)/
(2*stddev*stddev)); // flux at node
                }else{ // Uniform distribution
                        F0[i] = Q0; // all flxues same
                }
                fprintf(OUT, "%.6f %11.4f\n", x, F0[i]); // keeping
track
        }
        fclose(OUT);
}
```