Project-1 Report

C Code:

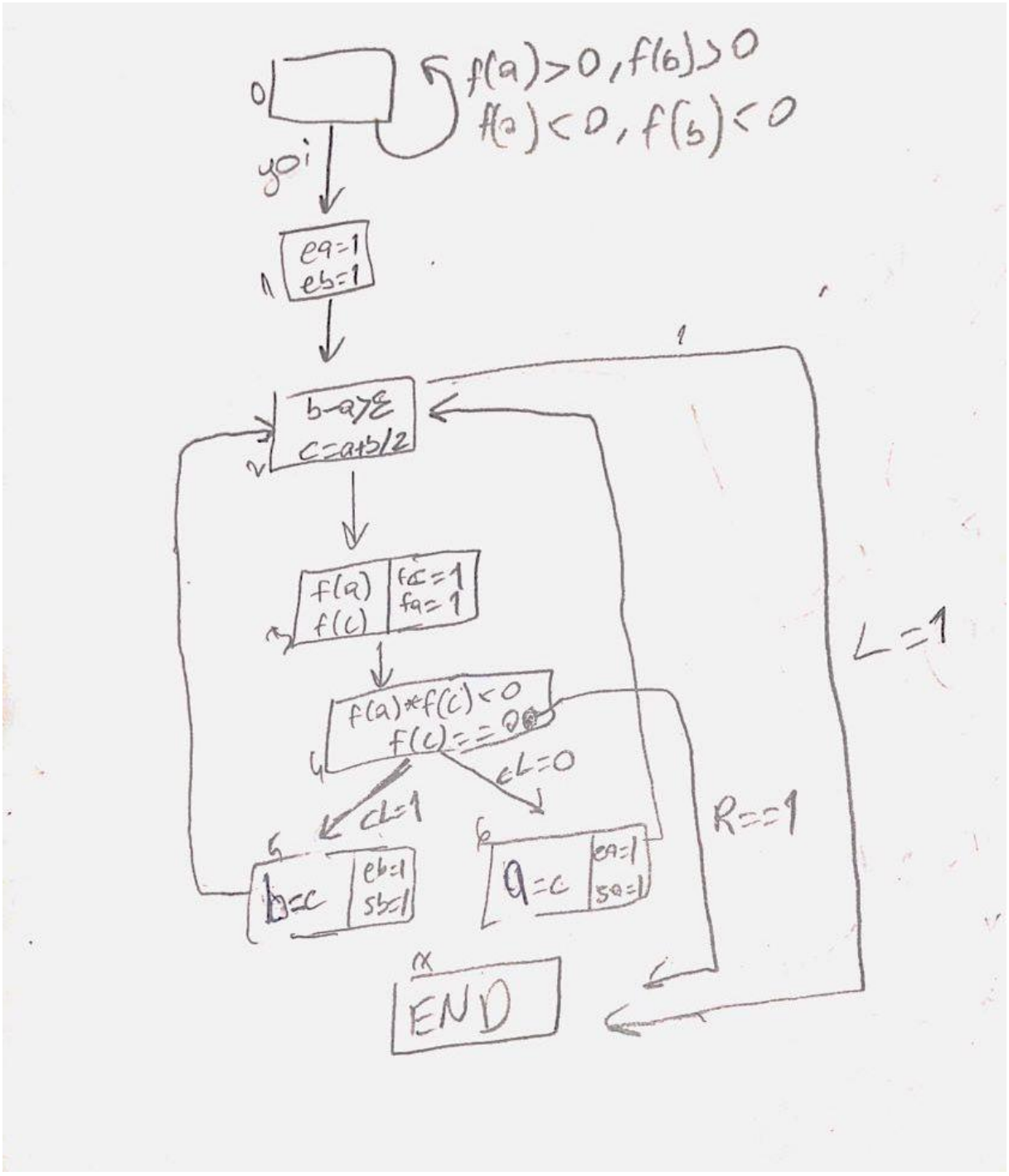
```
void bisection(double a, double b)
{
    if (func(a) * func(b) >= 0)
    {
        cout << "You have not assumed right a and b\n";
        return;
    }

    double c = a;
    while (abs(b-a) >= EPSILON)
    {
        // Find middle point
        c = (a+b)/2;

        // Check if middle point is root
        if (func(c) == 0.0)
            break;

        // Decide the side to repeat the steps
        else if (func(c)*func(a) < 0)
            b = c;
        else
            a = c;
    }
    cout << "The value of root is : " << c;
}
```

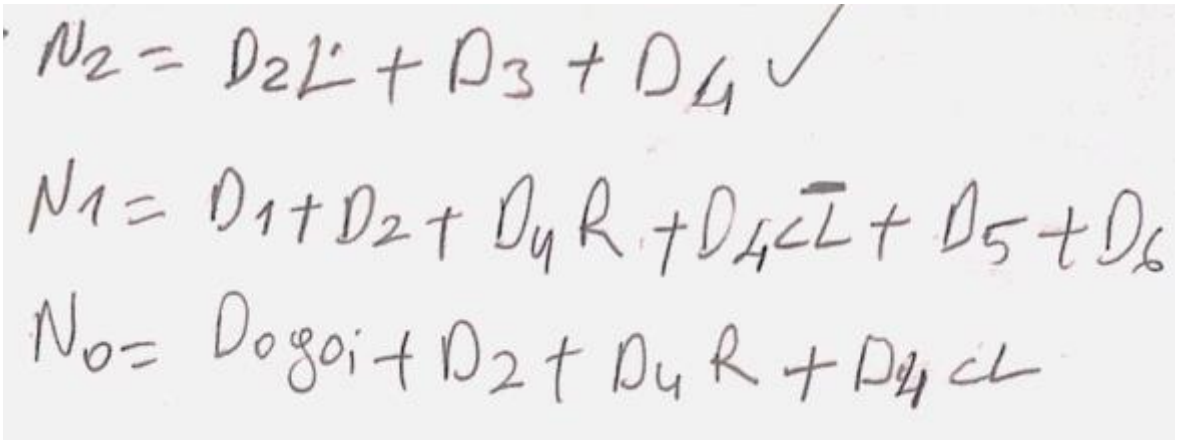
State Diagram :



State Transition Table:

C_2	C_1	C_0	L	Go:	cL	Root	N_2	N_1	N_0
0	0	0	X	0	X	X	0	0	0
0	0	0	X	0	X	X	0	0	0
0	0	0	X	1	X	X	0	0	1
0	0	1	X	X	X	X	0	1	0
0	1	0	0	X	X	X	0	1	1
0	1	0	1	X	X	X	1	1	1
0	1	1	X	X	X	X	1	0	0
1	0	0	X	X	X	1	1	1	1
1	0	0	X	X	1	X	1	0	1
1	0	0	X	X	0	X	1	1	0
1	0	1	X	X	X	X	0	1	0
1	1	0	X	X	X	X	0	1	0
1	1	1	X	X	X	X	0	0	0

Expressions:



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