

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <math.h>
4 #define epsilon 1e-12
5
6 typedef struct _kvadratna_jednacina kvadratna_jednacina;
7
8 struct _kvadratna_jednacina
9 {
10     double a;
11     double b;
12     double c;
13 };
14
15 typedef struct _comp comp;
16
17 struct _comp
18 {
19     double re;
20     double im;
21 };
22
23 typedef struct _resenja resenja;
24
25 struct _resenja
26 {
27     comp x1;
28     comp x2;
29 };
30
31 int main()
32 {
33     kvadratna_jednacina k;
34     resenja res;
35     double d;
36
37     k.a = 1.0;
38     k.b = 2.0;
39     k.c = 1.0;
40     d = k.b*k.b-4*k.a*k.c;
41     if(d>epsilon){
42         res.x1.re = -k.b/2/k.a-sqrt(d)/2/k.a;
43         res.x1.im = 0.0;
44         res.x2.re = -k.b/2/k.a+sqrt(d)/2/k.a;
45         res.x2.im = 0.0;
46         printf("x1 = %5.2f, x2 = %5.2f\n",res.x1.re,res.x2.re);
47     }
48     else if(d<-epsilon){
49         res.x1.re = -k.b/2/k.a;
50         res.x1.im = -sqrt(-d)/2/k.a;
51         res.x2.re = -k.b/2/k.a;
52         res.x2.im = sqrt(-d)/2/k.a;
53         printf("x1 = %5.2f + i * %5.2f, x2 = %5.2f + i * %5.2f\n",res.x1.re,res.x1.im,res.x2.re,res.x2.im);
54     }
55     else
56         res.x1.re = -k.b/2/k.a;
57         res.x1.im = 0.0;
58         res.x2.re = -k.b/2/k.a;
59         res.x2.im = 0.0;
60         printf("x1 = %5.2f, x2 = %5.2f\n",res.x1.re,res.x2.re);
61
62     return 0;
63 }

```