

```

1 //aufgabe1.c
2 //Übung 11 Aufgabe 1 GIP
3 //Felix Fleisch Gruppe Die. 14-18 170945
4
5 #include<stdio.h>
6
7 int fibonacci(int n){
8     if(n<=2){
9         return(1);
10    }else{
11        return(fibonacci(n-1)+fibonacci(n-2));
12    }
13 }
14
15 int digitNum(int in,int digit){
16     if(in<10){
17         if(in==digit){
18             return(1);
19         }else{
20             return(0);
21         }
22     }else{
23         if((in%10)==digit){
24             return(digitNum(in/10,digit)+1);
25         }else{
26             return(digitNum(in/10,digit));
27         }
28     }
29 }
30
31 int square(int n){
32     if(n)
33         return(square(n-1)+2*n-1);
34     return(0);
35 }
36
37 int descending(int n){
38     if(n<10)
39         return(1);
40     return(((n%10)<=((n%100)/10))*descending(n/10));
41 }
42
43 int main(){
44     int n,m;
45     printf("Fibonacci berechnen:\n");
46     scanf("%d",&n);
47     printf("%d\n",fibonacci(n));
48     printf("\n");
49
50     printf("Ziffernzahl von:\n");
51     scanf("%d %d",&n,&m);
52     printf("%d\n",digitNum(n,m));
53     printf("\n");
54
55     printf("Quadrat von:\n");
56     scanf("%d",&n);
57     printf("%d\n",square(n));
58     printf("\n");
59
60     printf("Ist absteigend:\n");
61     scanf("%d",&n);
62     printf("%d\n",descending(n));
63     printf("\n");
64
65     return(0);
66 }

```