

```

#include <stdio.h>

int recur(int n, int a, int b, int t0, int t1)
{
    if (n == 0)
        return t0;
    else if (n == 1)
        return t1;
    else
        return a * recur(n - 1, a, b, t0, t1) + b * recur(n - 2, a, b, t0, t1);
}

int main()
{
    int n, a, b, t0, t1, i;
    printf("Enter coefficients a and b (for  $T_n = a \cdot T_{n-1} + b \cdot T_{n-2}$ ): ");
    scanf("%d %d", &a, &b);
    printf("Enter first two terms T0 and T1: ");
    scanf("%d %d", &t0, &t1);
    printf("Enter number of terms: ");
    scanf("%d", &n);
    printf("Sequence: ");
    for (i = 0; i < n; i++)
        printf("%d ", recur(i, a, b, t0, t1));
    return 0;
}

```

main.c

Share

Run

```
1 #include <stdio.h>
2 int recur(int n, int a, int b, int t0, int t1)
3 {
4     if (n == 0)
5         return t0;
6     else if (n == 1)
7         return t1;
8     else
9         return a * recur(n - 1, a, b, t0, t1) + b * recur(n - 2, a, b, t0, t1);
10 }
11 int main()
12 {
13     int n, a, b, t0, t1, i;
14     printf("Enter coefficients a and b (for Tn = a*Tn-1 + b*Tn-2): ");
15     scanf("%d %d", &a, &b);
16     printf("Enter first two terms T0 and T1: ");
17     scanf("%d %d", &t0, &t1);
18     printf("Enter number of terms: ");
19     scanf("%d", &n);
20     printf("Sequence: ");
21     for (i = 0; i < n; i++)
22         printf("%d ", recur(i, a, b, t0, t1));
23     return 0;
}
```

Output

Enter coefficients a and b (for Tn = a*Tn-1 + b*Tn-2): 3 5
Enter first two terms T0 and T1: 2 6
Enter number of terms: 3
Sequence: 2 6 28

=== Code Execution Successful ===