

Da_Vinci_Code.java

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1/*UVA Online Judge Problem 11385 - Da Vinci Code (Accepted)
6import java.util.*;
7
8class Da_Vinci_Code{
9
10    static long fibIn[];
11    static int fibIndex[];
12    static long fib[] = new long[93];
13    static String s;
14    static char letter[];
15    static Scanner scan = new Scanner(System.in);
16    static Scanner strscan;
17
18    public static void main(String[] args){
19
20        int T = scan.nextInt();
21        int length;
22        for(int i = 0; i<T; i++){
23            length = scan.nextInt();
24            fibIn = new long[length];
25            fibIndex = new int[length];
26            for(int j = 0; j<length; j++){
27                fibIn[j] = scan.nextLong();
28            }
29            fib(92);
30            s = scan.nextLine();
31            s = scan.nextLine();
32            // int temp = 0;
33            int max = 0;
34            for(int j = 0; j<fibIn.length; j++){
35                int x = 0;
36                while (fibIn[j] != fib[x]){
37                    x++;
38                }
39                if (Math.max(x-1, max)>max)
40                {
41                    max = x-1;
42                }
43                fibIndex[j]=x-1;
44            // System.out.print((x-1)+" ");
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45         }
46         letter = new char[max];
47         Arrays.fill(letter, ' ');
48
49 //         temp = 0;
50         strscan = new Scanner(s);
51         strscan.useDelimiter("");
52         int j = 0;
53         while(strscan.hasNext())
54         {
55 //             if(s.charAt(j)==',' || s.charAt(j)==' '){
56 //                 temp++;
57 //                 System.out.println(">" + s + "<");
58 //             }
59             char a = strscan.next().charAt(0);
60             if((a) <= 'Z' && (a) >= 'A'){
61                 letter[fibIndex[j]-1]=a;
62                 j++;
63 //                 System.out.println(">" + a + "<");
64             }
65             if(j==length) break;
66         }
67         System.out.println(String.valueOf(letter));
68     }
69 //     System.out.println(Arrays.toString(fib));
70
71 }
72
73 //Returns the nth Fibonacci Sequence term
74 static public long fib(long n)
75 {
76 //     fibon = new long[(int)n+1];
77     long fibo;
78     if(n==0)
79         return 0;
80     if(n==1)
81         return 1;
82     if(fib[(int)n] != 0)
83         return fib[(int)n];
84     else
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85         fibo = fib(n-1) + fib(n-2);
86         fib[(int)n] = fibo;
87         return fibo;
88     }
89 }
90
91
```