
Dichotomic search

P81966_en

Write an efficient recursive function that returns the position of x in the subvector $v[\textit{left} .. \textit{right}]$. The function must return -1 if x does not belong to $v[\textit{left} .. \textit{right}]$ or if $\textit{left} > \textit{right}$.

Precondition

The vector v is sorted in strictly increasing order. Moreover, we have $0 \leq \textit{left} \leq \text{size of } v$ and $-1 \leq \textit{right} < \text{size of } v$.

Interface

```
C++      int position (double x, const vector<double>& v, int left, int right );
C        int position (double x, double v[], int left , int right );
Java     public static int position (double x, double[] v, int left , int right );
Python   position (x, v, left , right ) # returns int
MyPy     position (x: float , v: list [float ], left : int , right : int ) → int
```

Observation

You only need to submit the required procedure; your main program will be ignored.

Problem information

Author : Salvador Roura

Translator : Carlos Molina

Generation : 2024-05-03 00:17:45

© Jutge.org, 2006–2024.

<https://jutge.org>