Exercises — Int Vector Hill

version #

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Contents

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1 Int Vector Hill

Files to submit:

- int_vector_hill/int_vector_hill.c

Provided files:

- int_vector_hill/int_vector_hill.h

Authorized headers: You are only allowed to use the functions defined in the following headers:

- assert.h
- errno.h
- stddef.h
- err.h

1.1 Goal

Write a function that returns the top of the hill of a vector. It must also check if the hill is correct and will return '-1' otherwise.

```
int int_vector_hill(struct int_vector vec);
```

Structure of the vector:

```
struct int_vector
{
    size_t size;
    int data[INT_VECTOR_LENGTH];
};
```

A valid hill is:

- A sequence of positive integers growing up.
- The top of the hill (can be more than one).
- A sequence of positive integers decreasing.

1.2 Example

With a vector that contains:

```
struct int_vector vec =
{
    .size = 8,
    .data = {0, 0, 1, 4, 7, 7, 3, 2}
};
```

The functions returns the index of the first '7', so 4.

It is my job to make sure you do yours.