Select from two sorted arrays

Write an efficient function

**Interface**

C++
```
int select (int k, const vector<int>& v1, const vector<int>& v2);
```

Python
```
def select (k: int, v1: list[int], v2: list[int]) -> int:
```

that returns the $k$-th largest of all the elements contained in $v1$ and $v2$, taking into account repeated elements. For instance, if $v1$ contains a 5 and a 7, and $v2$ only contains a 5, then a call to `select(1, v1, v2)` should return 5, a call to `select(2, v1, v2)` should also return 5, and a call to `select(3, v1, v2)` should return 7.

**Precondition**

The vectors $v1$ and $v2$ are sorted in nondecreasing order. The index $k$ is correct, that is, it is between 1 and $v1$.size() + $v2$.size(). Therefore, at least one of the vectors is not empty.

**Observation**

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

**Problem information**

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Generation: 2023-04-13 19:16:41

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