1.4 Binary Search Demo
Binary search demo

**Goal.** Given a sorted array and a key, find index of the key in the array?

**Binary search.** Compare key against middle entry.
- Too small, go left.
- Too big, go right.
- Equal, found.

**successful search for 33**
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successful search for 33

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↑  ↑  ↑
lo  mid  hi
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\[ \text{lo} = \text{hi} \]

mid return 4

return 4
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unsuccessful search for 34

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lo = hi

mid return -1