**Binary Search Assignment**

int [] nums = {3, 8, 28, 31, 35, 44, 51, 64, 66, 81}; key = 8

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| **Loop #** | **low** | **high** | **mid** | **nums[mid]** | **key is ? than nums[mid]** |
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**Answer**: The key, 8, is found at index within the nums array.

int [ ] nums = {1, 2, 7, 10, 10, 11, 11, 20, 21, 21, 26, 33, 36, 42, 43, 54, 57, 60, 65, 66, 67, 86, 93, 99, 99}; key = 93

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| --- | --- | --- | --- | --- | --- |
| **Loop #** | **low** | **high** | **mid** | **nums[mid]** | **key is ? than nums[mid]** |
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**Answer**: The key, 82, is found at index within the nums array.

int [] nums = {4, 8, 9, 18, 24, 28, 29, 30, 39, 42, 50, 53, 63, 70, 74, 89}; key = 17

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| **Loop #** | **low** | **high** | **mid** | **nums[mid]** | **key is ? than nums[mid]** |
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The binary search returns because the key wasn't found in the nums array.