

HackerEarth Online Judge

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HackerEarth Online Judge - Phase 2 Algorithms Searching

We will discuss in this lecture the following topics

1- Linear Search

2- Binary Search I

3- Binary Search II

4- Ternary Search

[15 problems]

[50problems]

[50problems]

[5 problems]





Section 1: Linear Search

Section 2: Binary Search I

Section 3: Binary Search II

Section 4: Ternary Search







- [01] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/easy-sum-set-problem-7e6841ca/
- [02] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/yet-another-easy-problem-1f3273a0/
- [03] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/simple-search-4/
- [04] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/maximum-sum-4-f8d12458/
- [05] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/breakup-app/
- [06] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/min-max-8/
- [07] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/almost-golden-rectangular-1c9d72c0/
- [08] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/square-transaction-20/
- [09] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/rest-in-peace-21-1/
- [10] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/mannas-first-name-4/
- [11] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/counting-frog-paths-labd84d5/
- [12] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/repeated-k-times/
- [13] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/special-shop-69904c91/
- [14] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/joker-and-thieves-53e59f4a/
- [15] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/holiday-season-ab957deb/
- [16] https://www.hackerearth.com/practice/algorithms/searching/linear-search/practice-problems/algorithm/the-normal-type/







✓ Section 1: Linear Search

Section 2: Binary Search I

Section 3: Binary Search II

Section 3: Ternary Search







- [01] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/bishu-and-soldiers/
- [02] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-furious-five-69521576/
- [03] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/c-impresses-everyone/
- [04] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/to-do-b9cfd3e3/
- [05] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/discover-the-monk/
- [06] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-old-monk/
- [07] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/monks-encounter-with-polynomial/
- [08] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/flipping-the-string-831bbbbe/
- [09] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/sherlock-and-numbers/
- [10] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/d-30/
- [11] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/highest-average-64bdd761/
- [12] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/in-another-base-1-e0d0f1ca/
- [13] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/counting-triangles/
- [14] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/alice-and-escalator/
- [15] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/foo-and-exams-4/
- [16] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/highest-average-25400da7/
- [17] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/one-operation/
- [18] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/long-drive-on-14th/





- [19] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/student-arrangement-6/
- [20] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-soap-mystery/
- [21] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/timely-orders/
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- [23] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/bablu-ki-babli-51f74021/
- [24] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/charsi-in-love/
- [25] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/picu-bank-09e29493/
- [26] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/palindromic-substring-2-a3d45c46/
- [27] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/stones-love/
- [28] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/sumit-and-chocolates-c9e3069d/
- [29] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/compare-strings-1-1cb66e03/
- [30] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-graphic-game-59c30775/
- [31] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/alice-bob-carrey-abc/
- [32] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/bags-of-coins-7b1d612c/
- [33] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/gaurav-and-subarray-3-787fb90a/
- [34] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/problem-1-103/
- [35] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/query-multiples-6cf951be/
- [36] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/doghouses/





- [37] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/code-apocalypse-30-coming-soon/
- [38] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-enlightened-ones/
- [39] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/an-interesting-partition-problem-june-circuits-18f83691/
- [40] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/weighted-string/
- [41] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/kth-smallest-number-again-2/
- [42] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/rasta-and-kheshtak/
- [43] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/mehta-and-subarrays/
- [44] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/superior-substring-dec-circuits-e51b3c27/
- [45] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/dangerous-path-467b0dc7/
- [46] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/search-for-number/
- [47] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/choose-k-numbers-453f4bce/
- [48] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/string-queries-34/
- [49] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/smallest-substring-e1862fcf/
- [50] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/approximate/matrix-sum/



✓ Section 1: Linear Search

✓ Section 2: Binary Search I

Section 3: Binary Search II

Section 3: Ternary Search







- [51] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/approximate/ratio-317c498f/
- [52] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-soap-mystery-6/
- [53] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/diwali-lights-3358fa33/
- [54] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/tars-and-the-market-8a58f869/
- [55] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/global-maximum/
- [56] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/interesting-coins-5/
- [57] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/magic-potion-d54349f9/
- [58] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/new-world-11/
- [59] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/random-generator/
- [60] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/troubling-triple/
- [61] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/triangular-ranges-2/
- [62] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/zero-xor-e3085486/
- [63] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/monk-and-chocolates-60875f0e/
- [64] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/hp-and-numbers-ii-0115b16e/
- [65] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/your-own-sequence-113bf172/
- [66] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/supertables-3/
- [67] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/n-girls-bbd50ald/
- [68] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/partitions-5fd40ffc/





- [69] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/danny/
- [70] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/xsquare-and-number-list/
- [71] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/assignments-67454120/
- [72] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/starting-game-development/
- [73] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/amit-and-prime-numbers/
- [74] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/promotion-1/
- [75] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/not-decided/
- [76] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/kriti-and-her-birthday-gift/
- [77] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/rolling-balls-b8923a50/
- [78] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/painting-the-logo/
- [79] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/anupam-binary/
- [80] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/mobile-selection-acc2cf2b/
- [81] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/pablo-the-dea/
- [82] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/trial/
- [83] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/vowel-query-51648a6c/
- [84] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/pending/
- [85] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/wrestling-match/
- [86] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/two-arrays-2-0f24abf0/





- [87] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/help-fredo/
- [88] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/subset-problem-1-ce9c4e7b/
- [89] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/video-watching-8c6cbee6/
- [90] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-string-monster-july-easy/
- [91] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/walk-n-rest-ca02551e/
- [92] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/roy-and-tiles-1/
- [93] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/the-substring-game-c14f8bd2/
- [94] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/people-carrying-6dd467ed/
- [95] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/find-solutions/
- [96] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/find-me-10/
- [97] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/c-gukiz-height/
- [98] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/victory-over-power-4a0cb459/
- [99] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/glowing-bulbs/
- [100] https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/from-source-to-destination/





- ✓ Section 1: Linear Search
- ✓ Section 2: Binary Search I
- ✓ Section 3: Binary Search II

Section 3: Ternary Search







- [01] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/the-exam/
- [02] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/small-factorials/
- [03] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/download-file-b0fe3520/
- [04] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/puzzled-grid-1/
- [05] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/klth-crush-of-appu/
- [06] https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/approximate/paper-planes-8cb51f55/





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