



HackerRank Online Judge

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HackerRank Online Judge - Phase 2

Algorithms Basics



Lecture Agenda

We will discuss in this lecture
the following topics

- | | |
|-------------------|---------------|
| 1- Warm-up | [10 problems] |
| 2- Recursion | [10 problems] |
| 3- Sorting | [15 problems] |
| 4- Search | [25 problems] |
| 5- Implementation | [65 problems] |
-

A top-down view of a white desk. On the left, a person's hands are typing on a white Apple keyboard. Above the keyboard is a white Apple mouse. To the right of the mouse is a bright yellow wristwatch with a black face. In the bottom right corner, the top of a white smartphone is visible. The text "Let's STARTUP" is centered on the desk. "Let's" is in a small, grey, sans-serif font. "STARTUP" is in a large, bold, sans-serif font. "START" is black with a white speckled texture, and "UP" is solid red with a white speckled texture.

Let's
STARTUP

Lecture Agenda



Section 1: Warm-up

Section 2: Recursion

Section 3: Sorting

Section 4: Search

Section 5: Implementation



HackerRank - Warm-up



- [01] <https://www.hackerrank.com/challenges/simple-array-sum/problem>
- [02] <https://www.hackerrank.com/challenges/compare-the-triplets/problem>
- [03] <https://www.hackerrank.com/challenges/a-very-big-sum/problem>
- [04] <https://www.hackerrank.com/challenges/diagonal-difference/problem>
- [05] <https://www.hackerrank.com/challenges/plus-minus/problem>
- [06] <https://www.hackerrank.com/challenges/staircase/problem>
- [07] <https://www.hackerrank.com/challenges/mini-max-sum/problem>
- [08] <https://www.hackerrank.com/challenges/birthday-cake-candles/problem>
- [09] <https://www.hackerrank.com/challenges/time-conversion/problem>



Lecture Agenda



✓ Section 1: Warm-up

Section 2: Recursion

Section 3: Sorting

Section 4: Search

Section 5: Implementation



HackerRank - Recursion



- [01] <https://www.hackerrank.com/challenges/the-power-sum/problem>
- [02] <https://www.hackerrank.com/challenges/crossword-puzzle/problem>
- [03] <https://www.hackerrank.com/challenges/recursive-digit-sum/problem>
- [04] <https://www.hackerrank.com/challenges/simplified-chess-engine/problem>
- [05] <https://www.hackerrank.com/challenges/password-cracker/problem>
- [06] <https://www.hackerrank.com/challenges/stone-division-2/problem>
- [07] <https://www.hackerrank.com/challenges/arithmetic-expressions/problem>
- [08] <https://www.hackerrank.com/challenges/k-factorization/problem>
- [09] <https://www.hackerrank.com/challenges/bowling-pins/problem>
- [10] <https://www.hackerrank.com/challenges/simplified-chess-engine-ii/problem>
- [11] <https://www.hackerrank.com/challenges/repeat-k-sums/problem>



Lecture Agenda



✓ Section 1: Warm-up

✓ Section 2: Recursion

Section 3: Sorting

Section 4: Search

Section 5: Implementation



HackerRank - Sorting



- [01] <https://www.hackerrank.com/challenges/big-sorting/problem>
- [02] <https://www.hackerrank.com/challenges/tutorial-intro/problem>
- [03] <https://www.hackerrank.com/challenges/insertionsort1/problem>
- [04] <https://www.hackerrank.com/challenges/insertionsort2/problem>
- [05] <https://www.hackerrank.com/challenges/correctness-invariant/problem>
- [06] <https://www.hackerrank.com/challenges/runningtime/problem>
- [07] <https://www.hackerrank.com/challenges/quicksort1/problem>
- [08] <https://www.hackerrank.com/challenges/countingsort1/problem>
- [09] <https://www.hackerrank.com/challenges/countingsort2/problem>
- [10] <https://www.hackerrank.com/challenges/closest-numbers/problem>
- [11] <https://www.hackerrank.com/challenges/find-the-median/problem>
- [12] <https://www.hackerrank.com/challenges/countingsort4/problem>
- [13] <https://www.hackerrank.com/challenges/fraudulent-activity-notifications/problem>
- [14] <https://www.hackerrank.com/challenges/lilys-homework/problem>
- [15] <https://www.hackerrank.com/challenges/insertion-sort/problem>



Lecture Agenda



✓ Section 1: Warm-up

✓ Section 2: Recursion

✓ Section 3: Sorting

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HackerRank - Search



- [01] <https://www.hackerrank.com/challenges/icecream-parlor/problem>
- [02] <https://www.hackerrank.com/challenges/missing-numbers/problem>
- [03] <https://www.hackerrank.com/challenges/sherlock-and-array/problem>
- [04] <https://www.hackerrank.com/challenges/hackerland-radio-transmitters/problem>
- [05] <https://www.hackerrank.com/challenges/gridland-metro/problem>
- [06] <https://www.hackerrank.com/challenges/knightl-on-chessboard/problem>
- [07] <https://www.hackerrank.com/challenges/minimum-loss/problem>
- [08] <https://www.hackerrank.com/challenges/pairs/problem>
- [09] <https://www.hackerrank.com/challenges/connected-cell-in-a-grid/problem>
- [10] <https://www.hackerrank.com/challenges/short-palindrome/problem>
- [11] <https://www.hackerrank.com/challenges/count-luck/problem>
- [12] <https://www.hackerrank.com/challenges/cut-the-tree/problem>
- [13] <https://www.hackerrank.com/challenges/gena/problem>
- [14] <https://www.hackerrank.com/challenges/xor-quadruples/problem>
- [15] <https://www.hackerrank.com/challenges/red-knights-shortest-path/problem>
- [16] <https://www.hackerrank.com/challenges/maximum-subarray-sum/problem>

HackerRank - Search



- [17] <https://www.hackerrank.com/challenges/maximizing-mission-points/problem>
- [18] <https://www.hackerrank.com/challenges/making-candies/problem>
- [19] <https://www.hackerrank.com/challenges/bike-racers/problem>
- [20] <https://www.hackerrank.com/challenges/playing-with-numbers/problem>
- [21] <https://www.hackerrank.com/challenges/sorted-subsegments/problem>
- [22] <https://www.hackerrank.com/challenges/king-richards-knights/problem>
- [23] <https://www.hackerrank.com/challenges/task-scheduling/problem>
- [24] <https://www.hackerrank.com/challenges/similarpair/problem>
- [25] <https://www.hackerrank.com/challenges/almost-integer-rock-garden>
- [26] <https://www.hackerrank.com/challenges/distant-pairs/problem>



Lecture Agenda



✓ Section 1: Warm-up

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Section 5: Implementation



HackerRank - Implementation



- [01] <https://www.hackerrank.com/challenges/grading/problem>
- [02] <https://www.hackerrank.com/challenges/apple-and-orange/problem>
- [03] <https://www.hackerrank.com/challenges/kangaroo/problem>
- [04] <https://www.hackerrank.com/challenges/between-two-sets/problem>
- [05] <https://www.hackerrank.com/challenges/breaking-best-and-worst-records/problem>
- [06] <https://www.hackerrank.com/challenges/the-birthday-bar/problem>
- [07] <https://www.hackerrank.com/challenges/divisible-sum-pairs/problem>
- [08] <https://www.hackerrank.com/challenges/migratory-birds/problem>
- [09] <https://www.hackerrank.com/challenges/day-of-the-programmer/problem>
- [10] <https://www.hackerrank.com/challenges/bon-appetit/problem>
- [11] <https://www.hackerrank.com/challenges/sock-merchant/problem>
- [12] <https://www.hackerrank.com/challenges/drawing-book/problem>
- [13] <https://www.hackerrank.com/challenges/counting-valleys/problem>
- [14] <https://www.hackerrank.com/challenges/electronics-shop/problem>
- [15] <https://www.hackerrank.com/challenges/cats-and-a-mouse/problem>
- [16] <https://www.hackerrank.com/challenges/counting-valleys/problem>

HackerRank - Implementation



- [17] <https://www.hackerrank.com/challenges/the-hurdle-race/problem>
- [18] <https://www.hackerrank.com/challenges/designer-pdf-viewer/problem>
- [19] <https://www.hackerrank.com/challenges/utopian-tree/problem>
- [20] <https://www.hackerrank.com/challenges/angry-professor/problem>
- [21] <https://www.hackerrank.com/challenges/beautiful-days-at-the-movies/problem>
- [22] <https://www.hackerrank.com/challenges/strange-advertising/problem>
- [23] <https://www.hackerrank.com/challenges/save-the-prisoner/problem>
- [24] <https://www.hackerrank.com/challenges/circular-array-rotation/problem>
- [25] <https://www.hackerrank.com/challenges/permutation-equation/problem>
- [26] <https://www.hackerrank.com/challenges/jumping-on-the-clouds-revisited/problem>
- [27] <https://www.hackerrank.com/challenges/find-digits/problem>
- [28] <https://www.hackerrank.com/challenges/append-and-delete/problem>
- [29] <https://www.hackerrank.com/challenges/sherlock-and-squares/problem>
- [30] <https://www.hackerrank.com/challenges/library-fine/problem>
- [31] <https://www.hackerrank.com/challenges/cut-the-sticks/problem>
- [32] <https://www.hackerrank.com/challenges/repeated-string/problem>

HackerRank - Implementation



- [33] <https://www.hackerrank.com/challenges/jumping-on-the-clouds/problem>
- [34] <https://www.hackerrank.com/challenges/equality-in-a-array/problem>
- [35] <https://www.hackerrank.com/challenges/acm-icpc-team/problem>
- [36] <https://www.hackerrank.com/challenges/taum-and-bday/problem>
- [37] <https://www.hackerrank.com/challenges/bigger-is-greater/problem>
- [38] <https://www.hackerrank.com/challenges/minimum-distances/problem>
- [39] <https://www.hackerrank.com/challenges/halloween-sale/problem>
- [40] <https://www.hackerrank.com/challenges/bigger-is-greater/problem>
- [41] <https://www.hackerrank.com/challenges/kaprekar-numbers/problem>
- [42] <https://www.hackerrank.com/challenges/beautiful-triplets/problem>
- [43] <https://www.hackerrank.com/challenges/flatland-space-stations/problem>
- [44] <https://www.hackerrank.com/challenges/fair-rations/problem>
- [45] <https://www.hackerrank.com/challenges/cavity-map/problem>
- [46] <https://www.hackerrank.com/challenges/manasa-and-stones/problem>
- [47] <https://www.hackerrank.com/challenges/manasa-and-stones/problem>
- [48] <https://www.hackerrank.com/challenges/the-grid-search/problem>

HackerRank - Implementation



- [49] <https://www.hackerrank.com/challenges/magic-square-forming/problem>
- [50] <https://www.hackerrank.com/challenges/climbing-the-leaderboard/problem>
- [51] <https://www.hackerrank.com/challenges/extra-long-factorials/problem>
- [52] <https://www.hackerrank.com/challenges/non-divisible-subset/problem>
- [53] <https://www.hackerrank.com/challenges/queens-attack-2/problem>
- [54] <https://www.hackerrank.com/challenges/organizing-containers-of-balls/problem>
- [55] <https://www.hackerrank.com/challenges/encryption/problem>
- [56] <https://www.hackerrank.com/challenges/bigger-is-greater/problem>
- [57] <https://www.hackerrank.com/challenges/the-time-in-words/problem>
- [58] <https://www.hackerrank.com/challenges/the-grid-search/problem>
- [59] <https://www.hackerrank.com/challenges/3d-surface-area/problem>
- [60] <https://www.hackerrank.com/challenges/absolute-permutation/problem>
- [61] <https://www.hackerrank.com/challenges/bomber-man/problem>
- [62] <https://www.hackerrank.com/challenges/two-pluses/problem>
- [63] <https://www.hackerrank.com/challenges/larrys-array/problem>
- [64] <https://www.hackerrank.com/challenges/almost-sorted/problem>



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DO
MORE.