HackerEarth Online Judge

Prepared by: Mohamed Ayman

Algorithm Engineer at Valeo

Deep Learning Researcher and Teaching Assistant

at The American University in Cairo (AUC)

spring 2020

sw.eng.MohamedAyman@gmail.com

facebook.com/cs.MohamedAyman

linkedin.com/in/cs-MohamedAyman

github.com/cs-MohamedAyman

codeforces.com/profile/Mohamed_Ayman

HackerEarth Online Judge - Phase 2
Linear Data Structures

Lecture Agenda

We will discuss in this lecture the following topics

1- Arrays 1D [65 problems]

2- Arrays Multi-dimensional [20 problems]

3- Stacks [25 problems]

4- Queues [5 problems]


Let's
START UP

Lecture Agenda

Section 1: Arrays 1D

Section 2: Arrays Multi-dimensional

Section 3: Stacks

Section 4: Queues

HackerEarth - Arrays 1D

[01] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/range-query-2/

[02] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/bracket-sequence-1-40eab940/

[03] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/monk-and-welcome-problem/

[04] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/micro-and-array-update/

[05] https://www.hackerearth.com/practice/data-structures/hash-tables/basics-of-hash-tables/practice-problems/algorithm/prime-string-5e4e5f32/

[06] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/pairs-having-similar-element-eed098aa/

[07] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/hamiltonian-and-lagrangian/

[08] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/charged-up-array-f35a5e23/

[09] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/polygon-possible/

[10] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/charges-repel/

[11] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/monk-and-power-of-time/

[12] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/long-atm-queue-3/

[13] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/help-jarvis-8a39566e/

[14] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/no-sharing-capillary-82ed3fe2/

[15] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/maximize-the-earning-137963bc-323025a6/

[16] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/strange-game-1-7e758acb-1bff10f0/

[17] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/pepper-and-contiguous-even-subarray-9f3adf65/

[18] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/not-in-range-44d19403/

HackerEarth - Arrays 1D

[19] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/eedc/

[20] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/infinity-array-715a233b/

[21] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/maximum-of-k-size-subarrays-deque/

[22] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/modify-sequence/

[23] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/counting-the-subarrays-4187713a/

[24] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/digitial-sequence-ee0ea080/

[25] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/monk-and-lucky-minimum-3/

[26] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/monk-and-rotation-3/

[27] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/snackdown-contest/

[28] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/mark-the-answer-1/

[29] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/pairs-16/

[30] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/maximum-goodness/

[31] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/golf/distinct-count-2/

[32] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/perfect-subarray-43560f46/

[33] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/2-arrays-90c9019c/

[34] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/achhe-din-6baeb5d1/

[35] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/sumit-and-equal-array/

[36] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/lal-evaluation/

HackerEarth - Arrays 1D

[37] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/baaki-che/

[38] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/1st/

[39] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/sumits-love-for-maths/

[40] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/speed-7/

[41] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/b-39/

[42] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/testing-strings-d1f28949/

[43] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/equal-sum-5b547fc2/

[44] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/anshul-usama-and-punishment-a-64758169-ed00e7ab/

[45] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/is-it-some-space-cakewalk/

[46] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/x-4/

[47] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/zulu-encounters-a-sequence-problem/

[48] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/k-rotation-is-what-you-can-855157f8/

[49] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/can-you-solve-it/

[50] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/beautiful-segments/

[51] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/tired-of-trying/

[52] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/prasun-the-detective-77f90f8f/

[53] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/in-an-array-9fbe4c12/

[54] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/unique-subarrays/

HackerEarth - Arrays 1D

[55] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/supreme-subset-bb866a75/

[56] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/thief-and-warehouses-6ebf4e07/

[57] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/save-mrinal-35296e39/

[58] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/battlefield-13/

[59] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/fredo-and-large-numbers/

[60] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/segment-tree-baby/

[61] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/the-amazing-race-1/

[62] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/minimum-and-xor-or-6a05bbd4/

[63] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/beautiful-journey-1/

[64] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/long-jump-1-7d02705a/

[65] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/fixed-parity-440254c0/

[66] https://www.hackerearth.com/practice/data-structures/arrays/1-d/practice-problems/algorithm/the-code-generator-9d3f9afa/

Lecture Agenda

- ✔ Section 1: Arrays 1D
- **Section 2: Arrays Multi-dimensional**
- Section 3: Stacks
- Section 4: Queues

HackerEarth - Arrays Multi-dimensional

[01] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/roy-and-symmetric-logos-1/

[02] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/monk-and-operations/

[03] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/jadvaliioo-62280ff6/

[04] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/left-or-right-92c0b54c/

[05] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/honey-bees/

[06] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/monk-and-inversions-arrays-strings/

[07] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/find-the-string-4014dec6/

[08] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/the-wealthy-landlord/

[09] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/add-alternate-elements-of-2-dimensional-array/

[10] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/binary-blocks-4b173d4a/

[11] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/micro-and-sweet-distribution/

[12] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/saul-goodmans-problem-statement/

[13] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/k-priority-interview-d3447f63/

[14] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/square-sub-matrix-880321bd/

[15] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/magic-square-1-0747cf2f/

[16] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/submatrix-updates-1/

[17] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/welcome-to-pu-661e1420/

[18] https://www.hackerearth.com/practice/data-structures/arrays/multi-dimensional/practice-problems/algorithm/largest-square-3d7a938a/

Lecture Agenda

- ✔ Section 1: Arrays 1D
- ✔ Section 2: Arrays Multi-dimensional
- **Section 3: Stacks**
- Section 4: Queues

HackerEarth - Stacks

[01] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/a-game-of-numbers-1-5d3a8cb3/

[02] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/balanced-brackets-3-4fc590c6/

[03] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/fun-game-91510e9f/

[04] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/little-shino-and-pairs/

[05] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/staque-1-e790a29f/

[06] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/monk-and-prisoner-of-azkaban/

[07] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/circular-list-8e1319c9/

[08] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/minimum-add-to-make-parentheses-valid-9cba6259/

[09] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/bag-of-numbers/

[10] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/stakth-1-e6a76632/

[11] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/book-exercises-843d7c3b/

[12] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/super-reduced-strings-303701dd/

[13] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/jumpy-humpy-5e0231d6/

[14] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/little-monk-and-balanced-parentheses/

[15] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/mancunian-and-fantabulous-pairs/

[16] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/coding-legacy-in-nirma-2/

[17] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/nitish-and-pillars-0b5cfac4/

[18] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/nearest-smaller-element-929558b4/

HackerEarth - Stacks

[19] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/monk-celebrating-checkpoint/

[20] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/capital-of-hills/

[21] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/feel-taller/

[22] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/signal-range/

[23] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/monk-and-order-of-phoenix/

[24] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/grandmaster/

[25] https://www.hackerearth.com/practice/data-structures/stacks/basics-of-stacks/practice-problems/algorithm/fight-for-laddus/

Lecture Agenda

- ✔ Section 1: Arrays 1D
- ✔ Section 2: Arrays Multi-dimensional
- ✔ Section 3: Stacks
- Section 4: Queues

HackerEarth - Queues

[01] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/monk-and-power-of-time-3a648bf0/

[02] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/monk-and-chamber-of-secrets/

[03] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/disk-tower-b7cc7a50/

[04] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/number-recovery-0b988eb2/

[05] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/little-monk-and-goblet-of-fire/

[06] https://www.hackerearth.com/practice/data-structures/queues/basics-of-queues/practice-problems/algorithm/weird-planet-2000a170/

Lecture Agenda

- ✔ Section 1: Arrays 1D
- ✔ Section 2: Arrays Multi-dimensional
- ✔ Section 3: Stacks
- ✔ Section 4: Queues


DO
MORE.