## Data Structures (3130702)

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*Definition of data structures, types of data structure*
(Q.1 (a), S2024) (Q.1 (a), W2023) (Q.1 (a), S2023) (Q.1 (a), W2019)
*Time complexity*
(Q.5 (a), S2023) (Q.1 (b), W2022) (Q.1 (a), W2021) (Q.1 (c), W2019)
*Tower of Hanoi*
(Q.2 (a), S2024) (Q.3 (c), W2023) (Q.1 (b), S2023) (Q.4 (b), W2022) (Q.3 (b), S2021)
*Circular queue*
(Q.3 (b), W2022) (Q.3 (a), S2021) (Q.2 (c), W2021) (Q.4 (b), W2020) (Q.2 (c), S2020) (Q.2 (c), W2019)
*Priority queue*
(Q.3 (b), S2024) (Q.5 (c), S2023) (Q.4 (a), W2022) (Q.3 (b), S2021) (Q.1 (c), W2021) (Q.3 (c), W2020)
*Primitive and non-primitive data structures*
(Q.2 (b), W2023) (Q.5 (c), S2023) (Q.2 (b), W2023) (Q.1 (a), S2021) (Q.1 (c), W2021) (Q.1 (b), W2020)
*Sparse matrix*
(Q.4 (a), S2024) (Q.3 (c), W2023) (Q.5 (c), S2023) (Q.2 (a), W2022) (Q.1 (c), W2021) (Q.4 (b), W2019)
*Stack*
(Q.2 (c), S2024) (Q.1 (c), Q.2 (c), Q.3 (a), W2023) (Q.2 (c), S2023) (Q.1 (c), W2022) (Q.2 (c), S2021)
(Q.1 (c), Q.2 (c), W2021) (Q.3 (a), Q.4 (a), W2020) (Q.2 (a, b), S2020)
*Queue*
(Q.2 (c), S2024) (Q.2 (c), W2023) (Q.1 (c), Q.3 (c), S2023) (Q.3 (b), W2022) (Q.2 (c), S2021) (Q.3 (c),
W2021) (Q.1 (c), W2020) (Q.2 (a), S2020) (Q.2 (b), W2019)
*Linked list*
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(Q.4 (c), S2024) (Q.2 (a), W2023) (Q.3 (a, b), W2023) (Q.4 (b), S2023) (Q.4 (a), W2022) (Q.3 (c), S2021) (Q.3, W2021) (Q.1 (a), W2020) (Q.2 (c), S2020)

\*Binary tree traversal\*

(Q.3 (a), S2024) (Q.4 (c), S2024) (Q.4 (c), S2024) (Q.4 (b), W2023) (Q.4 (a), W2023) (Q.2 (a, c), S2023) (Q.2 (c), W2022) (Q.4 (a), W2021) (Q.4 (b), S2021)

\*AVL trees\*

(Q.4 (b), S2024) (Q.4 (a), W2023) (Q.2 (b), S2023) (Q.2 (c), W2022) (Q.4 (b), W2021)

\*Kruskal's and Prim's algorithm\*

(Q.3 (c), S2024) (Q.4 (c), W2023) (Q.4 (c), S2023) (Q.3 (c), W2022) (Q.5 (a), W2021) (Q.4 (c), S2021)

\*Breadth First Search, Depth First Search\*

(Q.3 (b), S2024) (Q.4 (c), W2023) (Q.4 (c), W2022) (Q.4 (b), W2021) (Q.4 (b), S2021) (Q.6 (b), W2020) (Q.3 (c), S2020)

\*Hashing\*

(Q.2 (b), S2024) (Q.5 (c), S2024) (Q.5 (a), W2023) (Q.3 (b), S2023) (Q.5 (c), S2023) (Q.5 (a), W2022) (Q.7 (b), W2020)

\*Collision Resolution\*

(Q.5 (c), W2023) (Q.5 (c), S2023) (Q.3 (c), S2023) (Q.5 (c), W2022) (Q.5 (b), S2021) (Q.4 (c), S2020)

\*Definition of fields, records, and files\*

(Q.5 (a), S2024) (Q.4 (a), S2023) (Q.5 (c), W2022) (Q.5 (a), W2021)

\*File Organization\*

(Q.5 (a), S2024) (Q.5 (b), W2023) (Q.5 (a), W2021) (Q.7 (c), W2020) (Q.4 (b), W2020)

\*Bubble Sort\*

(Q.5 (b), S2024) (Q.5 (B), W2023) (Q.3 (A), W2022) (Q.2 (C), W2020) (Q.5 (A), W2019)

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*Quick Sort*

(Q.5 (C), W2023) (Q.5 (B), W2022) (Q.5 (C), W2021) (Q.5 (B), S2020)

*Merge Sort*

(Q.1 (b), S2024) (Q.5 (B), W2022) (Q.2 (B), W2020) (Q.5 (B), W2019)
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\*Differentiate Sequential Search and Binary Search\*

(Q.5 (B), W2023) (Q.5 (B), W2021) (Q.5 (B), S2020)

\*Binary Search\*

(Q.5 (B), W2023) (Q.5 (B), S2023) (Q.3 (A), S2023) (Q.2 (B), W2022) (Q.5 (B), W2021) (Q.1 (B), S2021) (Q.2 (A), W2020) (Q.5 (B), S2020)