



PRAGATI ENGINEERING COLLEGE

(Autonomous)

ADB Road, Surampalem. –533 437, Near Peddapuram, Kakinada District., A.P.
(Approved by AICTE, Permanently Affiliated to JNTUK, Kakinada & Accredited by NBA)
(Recognized by UGC Under Sections 2(f) and 12 (B) of UGC act, 1956)
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date: 22/02/2024

CIRCULAR

All the students and staff are hereby informed that the event of Online Quiz on “**Searching and Sorting Techniques**” organized by pragsoft association with Carrier Guidance Cell will be conducted on **26-02-2024**.

For registration and other details the student may contact the Faculty Co-Ordinator Mr.S.K.Sankar (Mobile: 9063270672) and Student Moderators Ms.B Sudha| (22A35A0508) and Ms.P Jaya Lakshmi (22A35A0510).

HOD-CSE



PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

Approved by AICTE, Permanently Affiliated to JNTUK, Kakinada,
Accredited by NBA, NAAC with "A" grade, Recognized by UGC under sections 2(f) & 12(b)
ADB Road, Surampalem, Near Peddapuram, E.G. Dist., A.P.

DEPARTMENT OF CSE

Student Club

PRAGSOFT

in association with Career Guidance Cell
organizes

Online Quiz on

Searching And Sorting Techniques

26/02/2024 11:00 AM to 04:00 PM

Quiz Link

<https://forms.gle/gUywYcbGXJKA2zWc8>

Moderators

Ms . B . Sudha (22A35A0508)

Ms . P . Jayalakshmi (22A35A0510)

Faculty Coordinator

S. K. Sankar
Assistant professor
Department of CSE

THE FOLLOWING QUESTIONS ARE PRESENTED IN THE ONLINE QUIZ

QUIZ QUESTIONS

1. Which of the following is not a stable sorting algorithm?

- a) Insertion sort
- b) Selection sort
- c) Bubble sort
- d) Merge sort

ANSWER: B

2) Running merge sort on an array of size n which is already sorted is

- a) $O(n)$
- b) $O(n \log n)$
- c) $O(n^2)$
- d) None

ANSWER: B

3) If the given input array is sorted or nearly sorted, which of the following algorithm gives the best performance?

- a) Insertion sort
- b) Selection sort
- c) Quick sort
- d) Merge sort

ANSWER: A

4. Consider the situation in which assignment operation is very costly. Which of the following sorting algorithm should be performed so that the number of assignment operations is minimized in general?

- a) Insertion sort
- b) Selection sort
- c) Heap sort
- d) None

ANSWER: B

5. Given a number of elements in the range $[0 \dots n^3]$, which of the following sorting algorithms can sort them in $O(n)$ time?

- a) Counting sort
- b) Bucket sort
- c) Radix sort
- d) Quick sort

ANSWER: C

6. Counting sort performs Numbers of comparisons between input elements.

- a) 0
- b) n
- c) $n \log n$
- d) n^2

ANSWER: A

7. Which of the following algorithm design technique is used in the quick sort algorithm?

- a) Dynamic programming
- b) Backtracking
- c) Divide-and-conquer
- d) Greedy method

ANSWER: C

8. For merging two sorted lists of size m and n into sorted list of size $m+n$, we require comparisons of

- a) $O(m)$
- b) $O(n)$
- c) $O(m+n)$
- d) $O(\log m + \log n)$

ANSWER: C

9. What would be the worst case time complexity of the insertion sort algorithm, if the inputs are restricted to permutation of $1 \dots n$ with at most n inversion?

- a) $\theta(n^2)$
- b) $\theta(n \log n)$
- c) $\theta(n^{1.5})$
- d) $\theta(n)$

ANSWER: D

10. The radix sort does not work correctly if each individual digit is sorted using

- a) Insertion sort
- b) Counting sort
- c) Selection sort
- d) Bubble sort

ANSWER: C

11. Which of the following searching algorithm is fastest?

- a) binary search
- b) linear search
- c) jump search
- d) all are equally fast

Answer: a

12. How can Jump Search be improved?

- a) Step size should be other than \sqrt{n}
- b) Cannot be improved
- c) Begin from the k th item, where k is the step size
- d) Start searching from the end

Answer: c

13. In which of the cases uniform binary search fails compared to binary search?

- a) Complexity of code
- b) Many searches will be performed on several arrays of the same length
- c) Many searches will be performed on the same array
- d) A table lookup is generally faster than an addition and a shift

Answer: a

14. Which of the following is not an application of binary search?

- a) To search in unordered list
- b) Debugging
- c) Union of intervals
- d) To find the lower/upper bound in an ordered sequence

Answer: a

15. Which of the following step is taken after finding an element having value greater than the element being searched?

- a) binary search takes place in the forward direction
- b) binary search takes place in a backward direction
- c) linear search takes place in the forward direction
- d) linear search takes place in the backward direction

Answer: d

16. In which of the following case jump search will be preferred over exponential search?

- a) when the given array is very small in size
- b) when the given array is very large in size

- c) jumping backwards takes significantly more time than jumping forward
- d) jumping forward takes significantly more time than jumping backwards

Answer: d

17. Interpolation search is a variation of?

- a) Exponential search
- b) Linear search
- c) Binary search
- d) Jump search

Answer: c

18. What is the time complexity of Z algorithm for pattern searching (m = length of text, n = length of pattern)?

- a) $O(n)$
- b) $O(m)$
- c) $O(n + m)$
- d) $O(m * n)$

Answer: c

19. Which of the following searching algorithm is fastest when the input array is not sorted but has uniformly distributed values?

- a) linear search
- b) jump search
- c) interpolation search
- d) binary search

Answer: a

20. Where is linear searching used?

- a) Used all the time
- b) When the list has only a few elements
- c) When performing a single search in an unordered list
- d) When the list has only a few elements and When performing a single search in an unordered list

Answer: d

THE FOLLOWING STUDENTS ARE PARTICIPATED IN THE ONLINE QUIZ EVENT

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Summary

S.NO	BRANCH	COUNT
1	CSE	5
2	CSE-AI	72
3	CSE-DS	45
4	ECE	2
5	EEE	1
	TOTAL	125

Date: 26-02-2024

A Report On Technical Quiz Contest By PragSoft

A online quiz competition on DS (Sorting Techniques & Searching Techniques) is organized by Ms. B. Sudha (22A35A0508) and Ms. P. Jayalakshmi (22A35A0510) as resource persons on 26th February 2024. A total of 125 No's students from 1st and 3rd year B.Tech have attended the contest. The contest began at 11:00AM of 26th Feb 2024 and ended at 02:00 PM of 26th Feb 2024.

Dignitaries of the program were Dr.K Satyanarayana sir, Principal, Pragati Engineering College and Dr. D.V.Manjula, HOD, Department of Computer Science and Engineering, PEC, enlightened the audience by participating in quiz and its importance.

Principal Dr.K Satyanarayana Sir, PEC, congratulated all the participants and theorganizing team, Department of CSE Good luck.

Contest link:

<https://forms.gle/xX3av2hgGU4oz2rSA>

FACULTY CO-ORDINATOR

S K Sankar

Asst. Professor

CSE

HOD

Dr. D.V.Manjula

Professor & HOD

CSE

The following are the students who got merit certificate in the online quiz event

Certificate of Achievement

This certificate is proudly awarded to Pravallika Devi kommana of Roll Number 23A31A43E6 for their extraordinary performance in the online quiz conducted on the topic "SORTING AND SEARCHING TECHNIQUES" on 26th February, 2024



SIGNATURE OF PRINCIPAL

Certificate of Achievement

This certificate is proudly awarded to **Navya sri chundru** of Roll Number **23A31A43F5** for their extraordinary performance in the online quiz conducted on the topic "**SORTING AND SEARCHING TECHNIQUES**" on 26th February, 2024



SIGNATURE OF PRINCIPAL