

STUDENT PORTFOLIO



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Department: Data Science and Business Systems
Semester: IV

Subject Title: 21CSC204J Design and Analysis of Algorithm

Handled By: Dr. Rajkumar K

E-Lab Completion Status
Circle of Execution
Explanation of at least one program

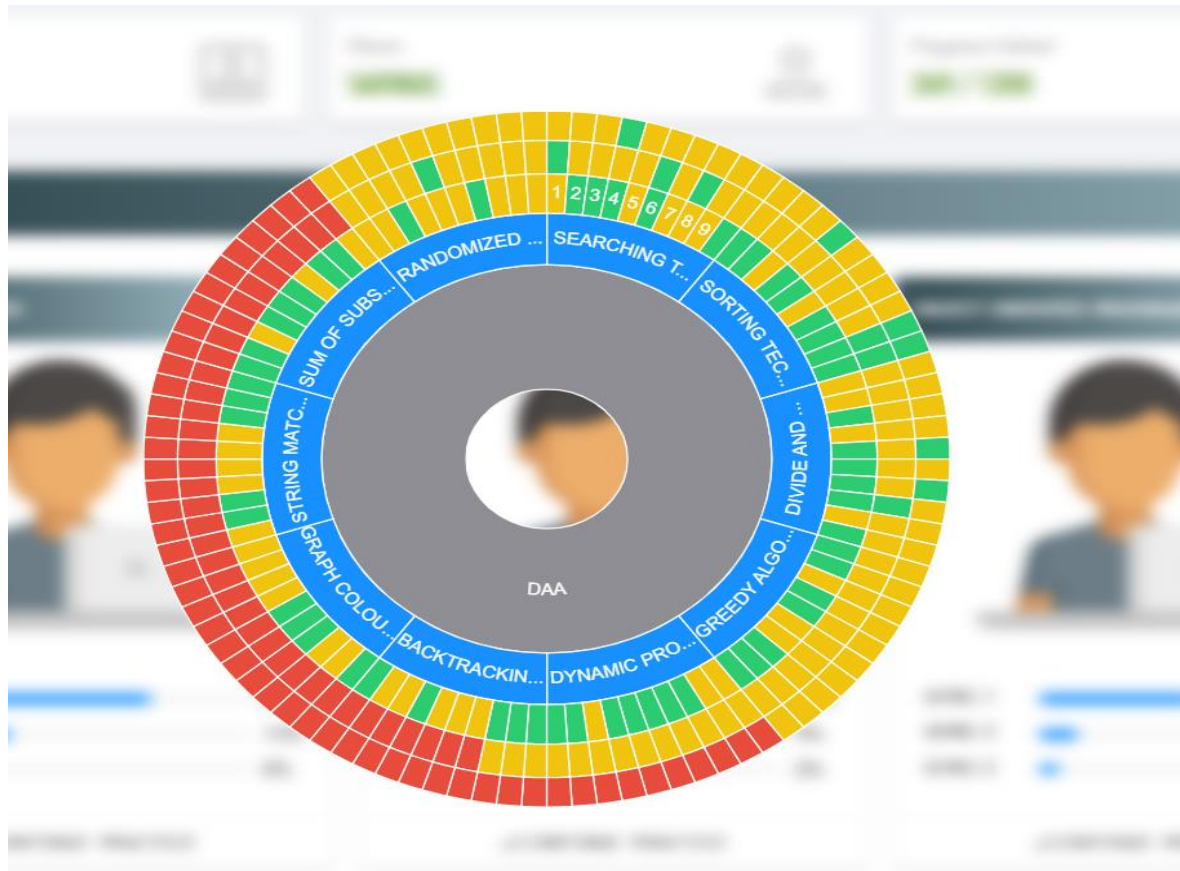
Algorithm -

- Read all intervals as (start, end) pairs.
- Sort the intervals by their end times in ascending order.
- Initialize:
 - count = 0 (to keep track of the number of selected intervals)
 - last_end_time = 0 (to store the end time of the last selected interval)
- Iterate over the sorted intervals:
 - If the current interval's start time is after last_end_time:
 - Select this interval.
 - Increment count.
 - Update last_end_time to the current interval's end time.
- Return count as the result.

Code:

```
#include<bits/stdc++.h>
using namespace std;
int n,l,z;
pair<int,int> a[500020];
int main(){
    cin>>n;
    for(int i=0;i<n;i++){
        cin>>a[i].second>>a[i].first;
    }
    sort(a,a+n);
    for(int i=0;i<n;i++){
        if(l<a[i].second){
            z++;
            l=a[i].first;
        }
    }cout<<z;
    return 0;
}
```

Lab Experiment Completion status and ELAB



R. Sai Vikas RA2311056010057 AL-1

EXP. No.	DATE	TITLE	Aim & Algorithm (1 Mark)	SUB TOTAL (10 Marks)					Time complexity analysis (5 Marks)	Dry run with sample I/P and O/P & Result (1 Mark)	VIVA (5 Marks)	TOTAL (20 Marks)
				Basic Selection (2 Marks)	Modularity (2.5 Marks)	Readability (2.5 Marks)	Validation (2 Marks)	Scalability (1 Mark)				
1	8/1/25	a) Insertion Sort b) Bubble Sort	1	2	1	1	2	1	2	1	12	12
2	24/1/25	Linear Search, Binary search	1	2	1	1	2	1	2	1	12	12
3	27/01/25	Merge Sort	1	2	1	1	1	1	2	1	14	14
4	03/02/25	Quick Sort	1	1	1.5	1.5	1	1	2	1	14	14
5	18/2/25	Strassen Matrix Multiplication	1	1	1.5	1.5	1	1	2	1	14	14
6		a) Finding Maximum and Minimum in an array b) Convex Hull Problem	1	2	2	2	1	1	2	1	16	16
7		a) Huffman Coding b) Knapsack using Greedy	1	2	2	2	1	1	2	1	16	16
8		Longest Common Subsequence	1	2	2	2	1	1	2	1	16	16
9		N Queen's Problem	1	2	2	2	1	1	2	1	16	16
10		Travelling Salesman Problem	1	2	2	2	1	1	2	1	16	16
11		Randomized Quick Sort	1	2	2	2	1	1	2	1	17	17
12		String Matching Algorithms	1	2	2	2	1	1	2	1	17	17

Completed

REAL WORLD APPLICATION IN DAA PPT VR/SIMULATION DEMO

https://docs.google.com/presentation/d/1fQFvfHamXple9QW8uMUt4np_oApMcD6i/edit?usp=sharing&ouid=116104830964058561503&rtpof=true&sd=true

NPTEL/HOTS Questions Solution.

Any other

(Write if you registered or practise apart from Hackerrank, Leetcode, Github.etc

Eg: Certification Programs related to DAA)

Competitions Won related to DAA

Any Presentations done for DAA with proof and explanation

https://docs.google.com/presentation/d/1fQFvfHamXple9QW8uMUt4np_oApMcD6i/edit?usp=sharing&ouid=116104830964058561503&rtpof=true&sd=true

Signature



Note: Enclose the assignment and relevant certificates along with the profile

