STUDENT PORTFOLIO

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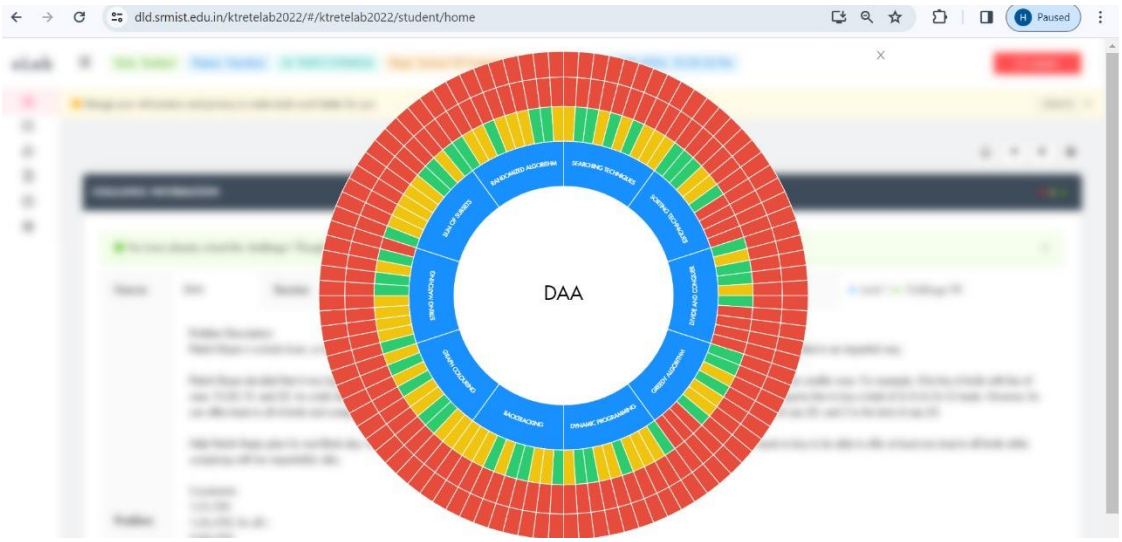
Department: COMPUTING TECHNOLOGIES
Semester: IV

Subject Title: 21CSC204J Design and Analysis of Algorithm
Handled By: Dr. V.Arulalan

ElAb Completion Status



Lab Experiment Completion status

21CSC204J – Design and Analysis of Algorithms

LIST OF EXPERIMENTS

Name: K. Harshini (RA2211003011299)
Yr & Sec: II Yr / D2 -Sec

S.No.	Experiments	Aim & Algo (1)	Program Implementation (10 Marks)						Time complexity analysis (3)	I/O and Result (1)	Viva (5)	Total (20)	Experiment mark (1)
			Basic Solution -(2)-	Basic Solution (2)	Modularity (2.5)	Readability (2.5)	Validation (2)	Scalability (1)					
1	a. Insertion sort b. Bubble sort	1		2	2.5	2.5	2	1	3	1	5	20	1
2	a. Linear search b. Binary search	1		2	2.5	2.5	2	1	3	0	5	19	0.95
3	Quick sort	1		2	2.5	2.5	2	1	3	1	5	20	1
4	Merge sort	1		2	2.5	2.5	2	1	3	1	5	20	1
5	Divide and conquer problems a. Strassen's Matrix multiplication	1		2	2.5	2.5	2	1	3	1	5	20	1
6	Divide and conquer problems a. Finding Maximum and Minimum in an array b. Convex Hull problem	1		2	2.5	2.5	2	1	3	1	5	20	1
7	Huffman coding using greedy programming	1		2	2.5	2.5	2	1	3	1	5	20	1
8	Knapsack using greedy programming	1		2	2.5	2.5	2	1	3	1	4	14	1
9	Finding the longest common subsequence from a sequence	1		2	2.5	2.5	2	1	3	1	3	18	0.90
10	N queen's problem	1		2	2.5	2.5	2	1	3	1	5	20	1
11	Travelling salesman problem using a. Dynamic programming b. Greedy programming	1		2	2.5	2.5	2	1	3	1	3	18	0.90
12	String matching algorithm – Rabin Karp algorithm	1		2	2.5	2.5	2	1	3	1	5	20	1
13	Randomized Quick Sort	1		2	2.5	2.5	2	1	3	1	5	20	1

completed

22/4/24

REAL WORLD APPLICATION IN DAA PPT VR/SIMULATION DEMO

https://github.com/HARSHINIKASTURI07/DAA-real-world-project

TITLE OF THE PROJECT: ENERGY-EFFICIENT ROUTING PROTOCOLS FOR WIRELESS SENSOR NETWORKS"

ABSTRACT:

Networks of distributed devices (sensors) that monitor and record conditions in a different environments and coordinate to pass their data through the network to a main location.

WSNs are crucial for applications like environmental monitoring, healthcare, home automation, and military uses.

Most sensor nodes are battery-operated, making energy conservation a critical design consideration.

REAL-WORLD APPLICATIONS OF WSNS:

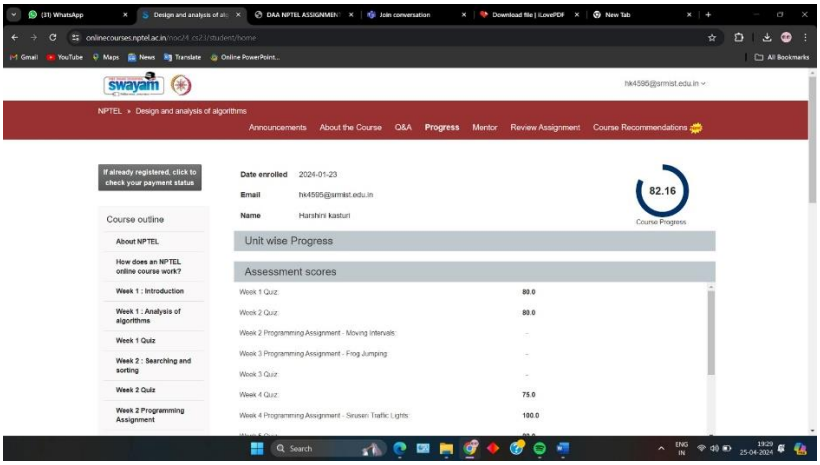
Agriculture: Use WSNs for precision farming techniques, monitoring soil moisture and conditions, optimizing irrigation schedules, and reducing water usage.

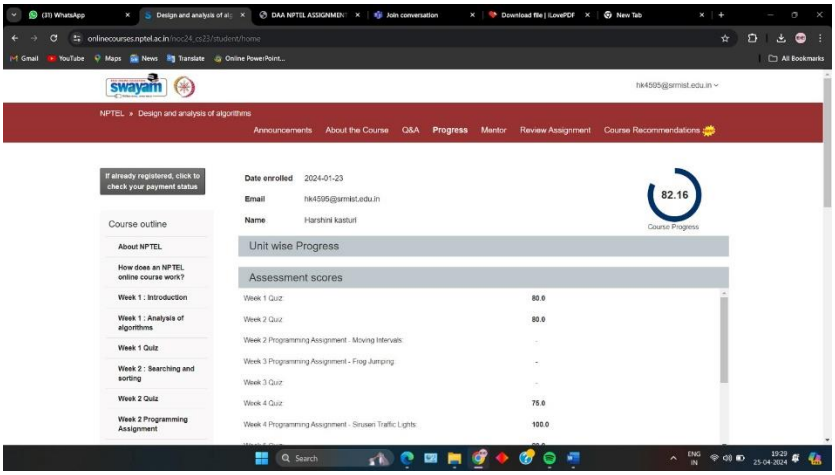
Healthcare Monitoring: Implement WSNs for remote health monitoring, tracking patient vital signs, and providing real-time data to medical professionals, enhancing patient care.

Environmental Monitoring: Deploy sensor networks for monitoring air and water quality, detecting forest fires early, and observing wildlife, contributing to conservation efforts.

Smart Cities: Utilize WSNs for managing traffic flows, monitoring public infrastructure, enhancing public safety, and optimizing energy use in urban environments

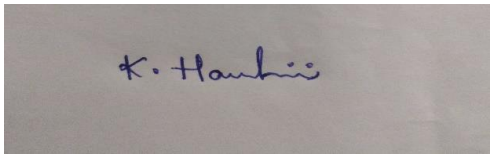
NPTEL/HOTS Questions Solution.





I have completed the 8 weeks of quiz and assignment in DAA NPTEL and scored good marks in it.

Signature



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