



Course Outcomes & CO-PO-PSO Mapping and Justification

Subject	DESIGN AND ANALYSIS OF ALGORITHMS LABORATORY	15CSL47
COURSE OUTCOMES:		
CO No.	On completion of this course, students will be able to:	Cognitive Level
15CSL47.1	Design algorithms using divide and conquer and greedy methods.	L6
15CSL47.2	Demonstrate the object oriented concepts such as class, inheritance , Exception and Multithreading.	L2
15CSL47.3	Analyze the performance of merge sort and quick sort algorithms using divide and conquer technique.	L4
15CSL47.4	Design algorithms using dynamic programming and back tracking methods.	L6

CO-PO-PSO MAPPING

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO1 2	PSO1	PSO2	PSO3
15CSL47.1	2	2	2	1	1	-	-	-	-	-	-	1	3	1	-
15CSL47.2	2	1	1	1	1	-	-	-	-	-	-	1	1	1	-
15CSL47.3	2	2	2	1	1	-	-	-	-	-	-	1	3	1	-
15CSL47.4	2	2	2	1	1	-	-	-	-	-	-	1	3	1	-
Avg. Mapping	2.0	1.75	1.75	1.0	1.0	-	-	-	-	-	-	1.0	2.5	1.0	-

CO-PO-PSO JUSTIFICATION

CO No.	PO/PSO	CL	Justification
15CSL47.1	PO1	2	Moderately mapped as students will be able to gain the knowledge of asymptotic notations, divide and conquer and graph theory for greedy technique.
	PO2	2	Moderately mapped as students will be able to analyze the algorithms of divide and conquer.
	PO3	2	Moderately mapped as students will be able to design new algorithms using divide and conquer, greedy technique.
	PO4	1	Slightly mapped as students will be able to choose the appropriate algorithms like merge and quick sort, greedy algorithms to design the applications to solve complex problems.
	PO5	1	Slightly mapped as students will be able to use modern tools such as eclipse and Netbeans.
	PO12	1	Slightly mapped as students will be able to apply the concept of divide and conquer technique in searching and sorting etc. problem types and concept of greedy technique in finding minimum spanning tree in case of e-commerce applications.
	PSO1	3	Strongly mapped as students will be able to apply the searching and sorting techniques in real world problems.
	PSO2	1	Slightly mapped as students will be able to apply the concept of algorithms in system software such as compilers and debuggers.
15CSL47.2	PO1	2	Moderately mapped as students will be able to gain the knowledge of object oriented concepts.
	PO2	1	Slightly mapped as students will be able to analyze the algorithms using object oriented concepts.
	PO3	1	Slightly mapped as students will be able to design new algorithms using object oriented concepts.
	PO4	1	Slightly mapped as students will be able to choose appropriate object oriented concepts to design the applications to solve complex problems.
	PO5	1	Slightly mapped as students will be able to use modern tools such as eclipse and Netbeans.
	PO12	1	Slightly mapped as students will be able to use object oriented concepts in future high level languages and applications.
	PSO1	1	Slightly mapped as students will be able to apply the object oriented concepts in real world problems such as multithreading.

	PSO2	1	Slightly mapped as students will be able to apply the concept of algorithms in system software such as compilers and debuggers.
15CSL47.3	PO1	2	Moderately mapped as students will be able to gain the knowledge of backward substitution method in solving recurrence relation.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of divide and conquer algorithms.
	PO3	2	Moderately mapped as students will be able to design new algorithms using divide and conquer technique.
	PO4	1	Slightly mapped as students will be able to choose algorithms based on time and space complexities.
	PO5	1	Slightly mapped as students will be able to use modern tools such as eclipse and Netbeans.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by divide and conquer techniques.
	PSO1	3	Strongly mapped as students will be able to apply the divide and conquer techniques in real world problems such as searching and sorting etc. problem types.
	PSO2	1	Slightly mapped as students will be able to apply the concept of algorithms in system software such as compilers and debuggers.
15CSL47.4	PO1	2	Moderately mapped as students will be able to gain the knowledge of dynamic method and back tracking concepts.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of dynamic programming algorithms.
	PO3	2	Moderately mapped as students will be able to design new algorithms using dynamic programming and back tracking techniques.
	PO4	1	Slightly mapped as students will be able to choose appropriate dynamic algorithms to design the applications to solve complex problems.
	PO5	1	Slightly mapped as students will be able to use modern tools such as eclipse and Netbeans.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by dynamic programming techniques.
	PSO1	3	Strongly mapped as students will be able to apply the dynamic programming techniques in real world problems such as TSP, Knapsack.
	PSO2	1	Slightly mapped as students will be able to apply the concept of algorithms in system software such as compilers and debuggers.

Prepared by

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HoD

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