Rajshahi University of Engineering & Technology

CSE 2202: Sessional Based on CSE 2201

Lab Report 04

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Submitted to

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Sessional – Cycle 4 – Problem A

0/1 Knapsack Problem.

Result:

N	Brute Force Selected Objects	Brute Force Profit	Brute Force Time (in sec)	Greedy Selected Objects	Greedy Profit	Greedy Time (in sec)
3	2	6	$12*10^{-6}$	2	6	$9*10^{-6}$
4	2	6	$46*10^{-6}$	3	5	$14*10^{-6}$
5	3	9	$22*10^{-5}$	3	9	$21*10^{-6}$
10	6	17	$12*10^{-2}$	6	15	$34*10^{-6}$

Table: Experimental Result

Discussion: In the Bruteforce technique, the complexity is $O(2^n)$ whereas the greedy approach has $O(n\log n)$. Thus, the time varying due to tabulated values are thus. Again, the Bruteforce technique will obvious to provide the desired maximum profit whereas the greedy approach may or may not provide the maximum profit in the whole scenario.