

CISC 699 Applied Project - Homework 1

- Please format your document name: LastName_Homework1
- Submission Deadline:
- Points: 100

Requirement

This is an individual assignment that covers the content of lecture 1 to lecture 3. Please answer following questions.

1. Please illustrate the four different research processes in your own words. Please don't copy and paste from the lecture notes. (15 points)
2. Please illustrate the general structure of a research paper. (15 points)
3. Please use dynamic programming to produce the optimal solution to the task assignment problem given as follows: (70 points)

Conditions:

- a. 2 cloud servers are available, Cloud A and B.
- b. 5 tasks are involved, Tasks 1, 2, 3, 4, and 5.
- c. Each task needs different execution time lengths and energy levels on different cloud servers. Detailed information refers to Table II.

Requirement:

- a. Produce an energy mapping table showing the minimum energy level at each timing constraint. (50 points)
- b. Create a task assignment plan to minimize the total cost of energy under timing constraint 10. Dynamic programming is required. (20 points)

Show your detailed steps; simply giving your final answer will only earn partial credits.

Table II. Information Table.

Task	Cloud A		Cloud B	
	Time	Energy	Time	Energy
Task 1	1	4	2	3
Task 2	3	6	5	3
Task 3	5	6	3	8
Task 4	2	5	4	3
Task 5	2	4	3	2

