Week 3: Assignment 3

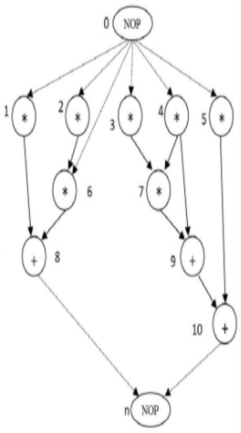
The due date for submitting this assignment has passed.

Due on 2021-08-25, 23:59 IST.

As per our records you have not submitted this assignment.

Consider the Sequential Graph shown in the figure below. Each MUL operation takes two-unit times, and ALU takes one unit of time. Given three MUL and one ALU, determine the minimum latency resource-constrained (MLRC) LIST-schedule and answer the following questions from 1 to 8?

```
LIST_L( G_s(V, E), a ) {
    l = 1;
    repeat {
        for each resource type k = 1, 2, ..., n_res {
            Determine candidate operations U_{l,k};
            Determine unfinished operations T_{l,k};
            Select S_k ⊆ U_{l,k} vertices, such that |S_k| + |T_{l,k}| ≤ a_k;
            Schedule the S_k operations at step l by setting t_i = l ∀i : v_i ∈ S_k;
        }
        l = l + 1;
    }
    until (v_n is scheduled);
    return (t);
}
```



1) Which one is the last operation to be scheduled by the MLRC schedule? **2 points**

- Only 8
- Only 9
- Only 10
- Either 8 or 10

No, the answer is incorrect.
Score: 0

Accepted Answers:
Either 8 or 10

2) The start time of operations 3 and 4 are **1 point**

- 1, 2
- 2, 2
- 1, 1
- 2, 1

No, the answer is incorrect.
Score: 0

Accepted Answers:
1, 1

3) The latency of this MLRC schedule is **0 points**

- 6
- 7
- 8
- 9

No, the answer is incorrect.
Score: 0

Accepted Answers:
7

4) Number of ALU (+) operation/s in time step 4 is **1 point**

- 0
- 1
- 2
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
0

5) Number of MUL(*) operation/s in time step 3 is **1 point**

- 0
- 1
- 2
- 3

No, the answer is incorrect.
Score: 0

Accepted Answers:
3

6) The ALAP time of operation 8 is **0 points**

- 8
- 7
- 6
- 5

No, the answer is incorrect.
Score: 0

Accepted Answers:
7

7) The ASAP time of operation 2 is **1 point**

- 4
- 3
- 2
- 1

No, the answer is incorrect.
Score: 0

Accepted Answers:
1

8) Time step 7 contains which operation **1 point**

- Only MUL
- Only ALU
- Both MUL and ALU
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Only ALU