

Question 1

Correct

Mark 1.00 out of 1.00

When we create a task decomposition we may have tasks that are independent of each other and can be executed simultaneously if we have enough resources.

However, a task may need data produced by other tasks. Thus, such a task should not start its computation until all its dependencies have completed their work. Consequently, we say that a task has a *dependency* on other task or tasks, and those other tasks have to complete their work before such dependencies in the parallel execution in order to obtain correct results. In order to have a correct scheduling of tasks, we store all this information in a Directed Acyclic Graph (DAG). In view of its purpose, such DAG is named *Task Dependence Graph* (TDG). Nodes represent computation in a task and edges represent execution order constraints (due to dependencies) between them.

Select one:

- ☒ True ✓
- ☐ False

Well done!

A *Task Dependence Graph* (TDG) is very important in parallelism.

The correct answer is 'True'.

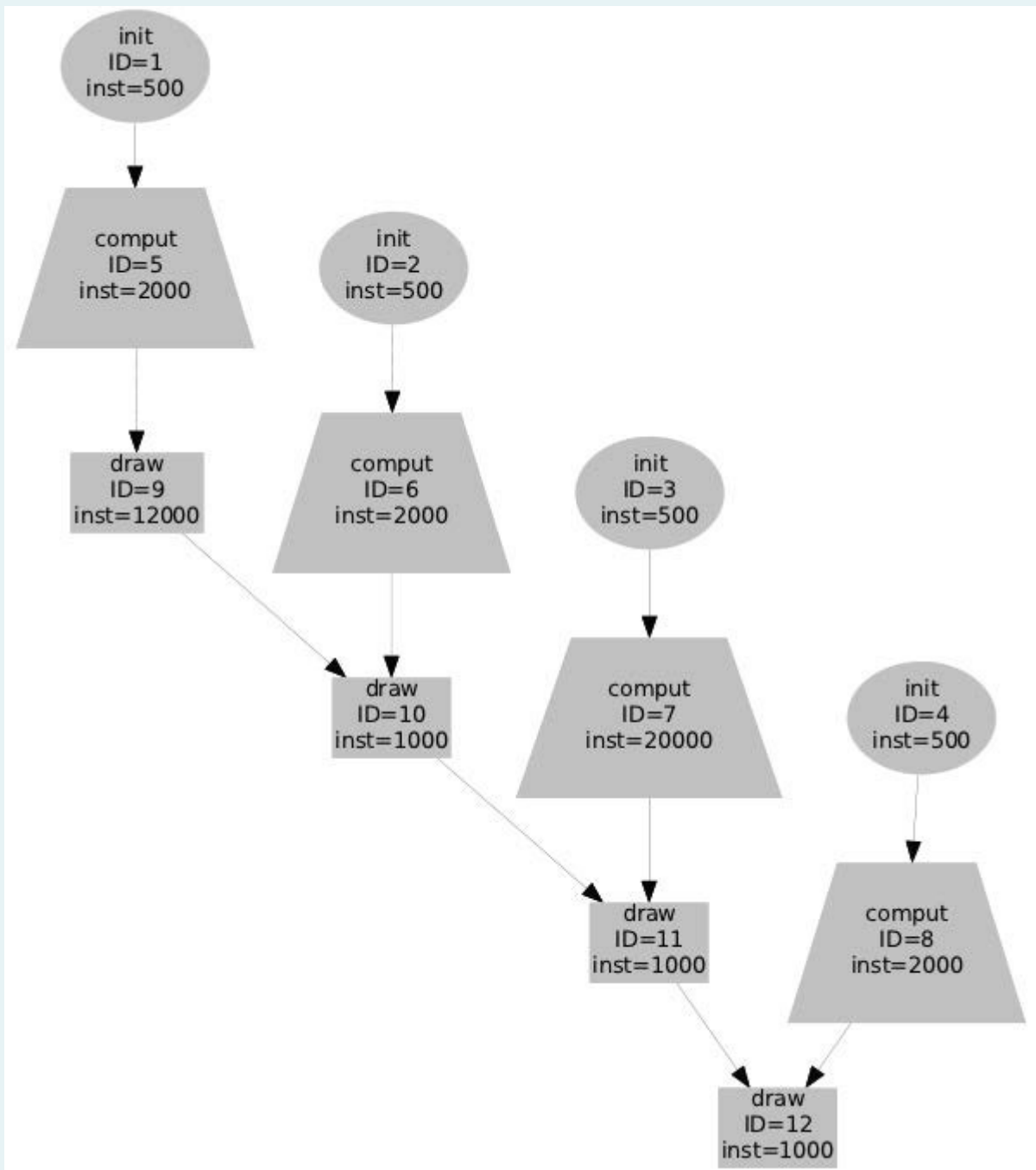
Try another question like this one

Question 2

Correct

Mark 0.67 out of 1.00

Given the following task graph where `inst` indicates the cost, in terms of number of instructions, for task with id



Please, answer the following questions:

1. Which is the value for T_I ?

Answer: 43000



Well done!

The correct answer is: 43000

Try another question like this one

Question 3

Correct

Mark 0.67 out of 1.00

2. Which of the following sequences of tasks corresponds with the critical path in the task graph?

Select one:

☐ 1, 5, 9, 10, 11, 12

☐ 1, 2, 3, 4, 8, 12

☒ 3, 7, 11, 12 ✓ Well done!

Your answer is correct.

The correct answer is: 3, 7, 11, 12

Try another question like this one

Question 4

Correct

Mark 1.00 out of 1.00

3. Which is the corresponding value for T_{∞} ?

Answer: ✓

Well done!

The correct answer is: 22500

Try another question like this one

Question 5

Correct

Mark 1.00 out of 1.00

4. Which is the value of the *Parallelism* metric that could be obtained with this task graph?

Note: express the value using two decimals and a . as the decimal mark (e.g. 3.14)

Answer:



Congratulations!

The correct answer is: 1.91

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