

CS 327E Class 11

November 25, 2019

Announcements

Milestone 12:

- What: Group Presentations.
- When: Week of Dec. 9th. M-F 6:00pm - 8:00pm.
- Where: TBD.
- Requested Action: Email me your preferred times by EOD tomorrow.

1) In Airflow, a workflow is modeled as a _____ ?

- A. Undirected Cyclic Graph
- B. Directed Acyclic Graph
- C. Directed Graph

2) How is a DAG defined in Airflow?

- A. Standard SQL file
- B. Jinja template file
- C. Standard Python file

3) How is a task executed in Airflow?

- A. The unit of work is executed by a **single** `Operator`
- B. The unit of work is executed by **multiple** `Operators`
- C. The unit of work is executed by a `SubDag`

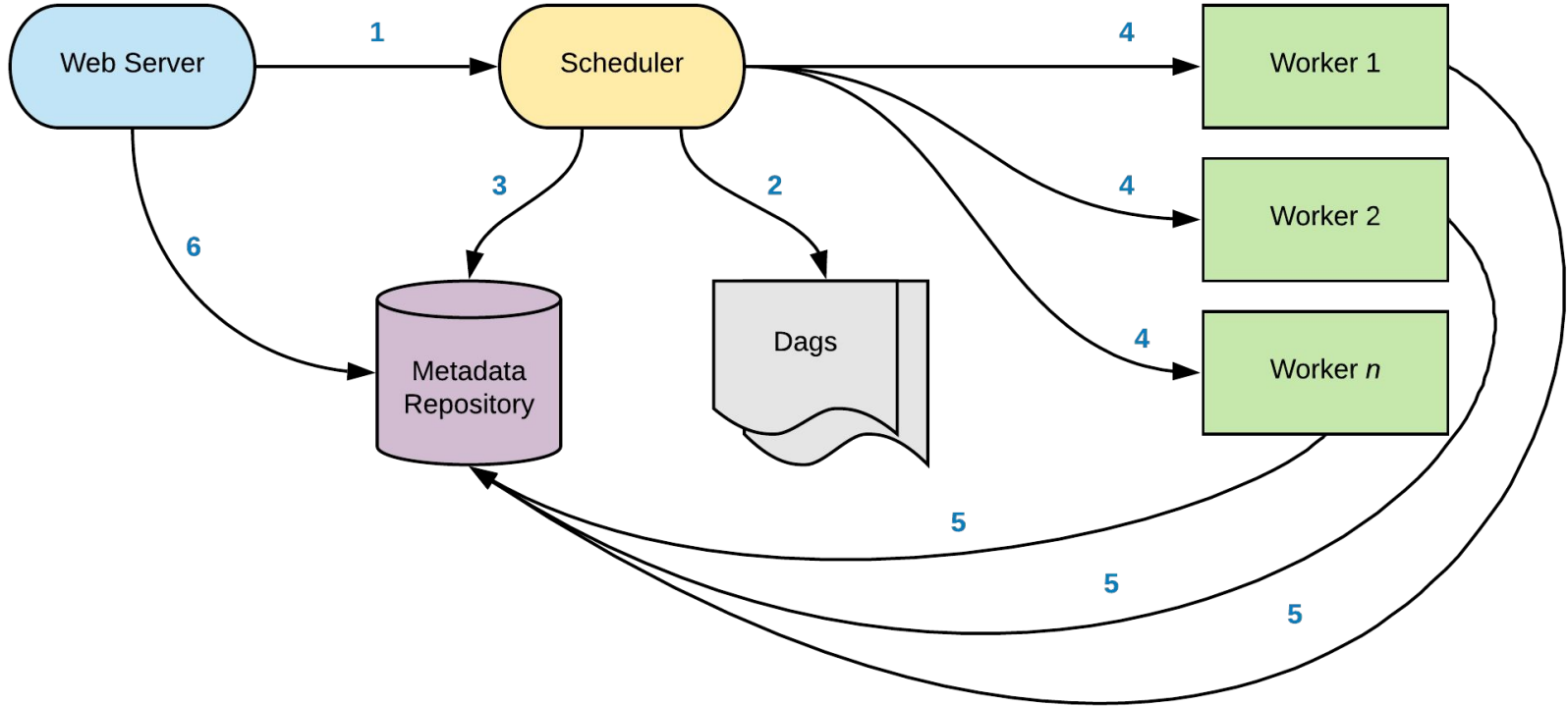
4) What does the statement $t1 \gg t2$ mean where $t1$ and $t2$ each represent a task?

- A. $t1$ runs first and $t2$ runs second
- B. $t2$ runs first and $t1$ runs second
- C. $t1$ and $t2$ must run in parallel
- D. $t1$ and $t2$ do not have an ordering

5) A trigger rule specifies the conditions under which the tasks can _____.

- A. execute
- B. sleep
- C. succeed
- D. fail

Airflow System



Basic Commands

```
airflow test <dag_name> <task_name> <yyyy-mm-dd>
```

```
airflow backfill <dag_name> -s <yyyy-mm-dd> -e <yyyy-mm-dd>
```

```
airflow clear <dag_name> -s <yyyy-mm-dd> -e <yyyy-mm-dd>
```

```
airflow list_tasks <dag> --tree
```

```
airflow list_dags # requires scheduler to be running
```

Airflow Setup

<https://github.com/cs327e-fall2019/snippets/wiki/Airflow-Setup>

Hands-on Exercise

```
git clone https://github.com/cs327e-fall2019/snippets.git
```

or

```
git pull origin master to pull down the latest code
```

6 Relevant Files:

```
01_oscar_workflow.py - 04_oscar_workflow.py  
oscars_Winning_Actors.py + oscars_Winning_Actresses.py
```

Practice Problem

Run and fix `04_oscar_workflow.py`

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Run and fix `04_oscar_workflow.py`

What is the cause of the error: Relationships can only be set between Operators; received str?

- A. Incorrect use of `BashOperator`
- B. Task is missing from DAG
- C. Invalid SQL syntax

Milestone 11

<http://www.cs.utexas.edu/~scohen/milestones/Milestone11.pdf>