

[Return to "Data Engineering Nanodegree" in the classroom](#)[DISCUSS ON STUDENT HUB](#)

Data Pipelines with Airflow

REVIEW

CODE REVIEW 6

HISTORY

▶ airflow/plugins/operators/stage_redshift.py 3

▶ airflow/plugins/operators/load_dimension.py 1

▶ airflow/plugins/operators/data_quality.py 1

▼ airflow/dags/udac_example_dag.py 1

```
1 from datetime import datetime, timedelta
2 import os
3 from airflow import DAG
4 from airflow.operators.dummy_operator import DummyOperator
5 from airflow.operators import (StageToRedshiftOperator, LoadFactOperator,
6                               LoadDimensionOperator, DataQualityOperator)
7 from helpers import SqlQueries
8
9 default_args = {
```

AWESOME

Nice work with the default argument here. 🍌

```
10     'owner': 'udacity',
11     'depends_on_past': False,
12     'retries': 3,
13     'retry_delay': timedelta(minutes=5),
14     'start_date': datetime(2019, 1, 12),
15     'email_on_retry': False
16 }
17
18 dag = DAG('udac_example_dag',
19          default_args=default_args,
20          description='Load and transform data in Redshift with Airflow',
21          schedule_interval='0 * * * *',
22          catchup=False
23 )
24
25 start_operator = DummyOperator(task_id='Begin_execution', dag=dag)
26
27 stage_events_to_redshift = StageToRedshiftOperator(
28     task_id='Stage_events',
29     dag=dag,
30     table="staging_events",
31     redshift_conn_id="redshift",
32     aws_credentials_id="aws_credentials",
33     s3_bucket="udacity-dend",
34     s3_key="log_data",
35     json_path="s3://udacity-dend/log_json_path.json",
36     file_type="json"
37 )
38
39 stage_songs_to_redshift = StageToRedshiftOperator(
40     task_id='Stage_songs',
41     dag=dag,
42     table="staging_songs",
43     redshift_conn_id="redshift",
44     aws_credentials_id="aws_credentials",
45     s3_bucket="udacity-dend",
46     s3_key="song_data/A/A/A",
47     json_path="auto",
48     file_type="json"
49 )
50
51 load_songplays_table = LoadFactOperator(
52     task_id='Load_songplays_fact_table',
53     dag=dag,
54     table="songplays",
55     redshift_conn_id="redshift",
56     load_sql_stmt=SqlQueries.songplay_table_insert
57 )
58
59 load_user_dimension_table = LoadDimensionOperator(
60     task_id='Load_user_dim_table',
61     dag=dag,
62     table='users',
63     redshift_conn_id="redshift",
64     load_sql_stmt=SqlQueries.user_table_insert
65 )
66
67 load_song_dimension_table = LoadDimensionOperator(
68     task_id='Load_song_dim_table',
69     dag=dag,
70     table='songs',
71     redshift_conn_id="redshift",
```

```

72     load_sql_stmt=SqlQueries.song_table_insert
73 )
74
75 load_artist_dimension_table = LoadDimensionOperator(
76     task_id='Load_artist_dim_table',
77     dag=dag,
78     table='artists',
79     redshift_conn_id="redshift",
80     load_sql_stmt=SqlQueries.artist_table_insert
81 )
82
83 load_time_dimension_table = LoadDimensionOperator(
84     task_id='Load_time_dim_table',
85     dag=dag,
86     table='time',
87     redshift_conn_id="redshift",
88     load_sql_stmt=SqlQueries.time_table_insert
89 )
90
91 run_quality_checks = DataQualityOperator(
92     task_id='Run_data_quality_checks',
93     dag=dag,
94     tables=['songplays', 'users', 'songs', 'artists', 'time'],
95     redshift_conn_id="redshift"
96 )
97
98 end_operator = DummyOperator(task_id='Stop_execution', dag=dag)
99
100 #
101 # Task ordering for the defined DAG tasks
102 #
103
104 start_operator >> stage_events_to_redshift
105 start_operator >> stage_songs_to_redshift
106
107 stage_events_to_redshift >> load_songplays_table
108 stage_songs_to_redshift >> load_songplays_table
109
110 load_songplays_table >> load_user_dimension_table
111 load_songplays_table >> load_song_dimension_table
112 load_songplays_table >> load_artist_dimension_table
113 load_songplays_table >> load_time_dimension_table
114
115 load_user_dimension_table >> run_quality_checks
116 load_song_dimension_table >> run_quality_checks
117 load_artist_dimension_table >> run_quality_checks
118 load_time_dimension_table >> run_quality_checks
119
120 run_quality_checks >> end_operator

```

► [airflow/plugins/operators/load_fact.py](#)

► [airflow/plugins/operators/_init_.py](#)

► [airflow/plugins/helpers/sql_queries.py](#)

► [airflow/plugins/helpers/_init_.py](#)

► [airflow/plugins/_init_.py](#)

► [airflow/create_tables.sql](#)

[RETURN TO PATH](#)

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