**AIRFLOW**

1. Explore the below concepts in airflow

DAG

Operators

Executors

Cron expressions

Variables (different ways to create variables)

1. Input = [”DAG”, ”variable”, ”preset”]

Create 2 PythonOperator tasks.  
 In the first task, create an airflow variable with given input.

In the second task, get the variable and find the length of each word in the list. Print the word and its length as a dictionary.

1. Do the following steps in separate tasks
   1. Add two values a and b.
   2. Subtract two values c and d.
   3. Multiply two values e and f.

Print the results in each task

Try to run the above tasks parallely and sequentially.

1. Create tables with following details in postgres.
   1. Customers with columns customer\_id (Primary key), customer\_name, place.

Create around 5 rows for the customers table.

* 1. Orders with columns order\_id (Primary key), customer\_id, order\_date.
  2. Product\_returns with columns return\_id (Primary key), customer\_id, return\_date.

Create an airflow task to insert 2 rows in the Orders and Product\_returns table for every 2 minutes.

1. Create a table with following details in postgres.
   1. Purchase\_details with columns id (Primary key), customer\_id, total\_orders, total\_returns, created\_time (timestamp).

Create an airflow task and,

1. Use Orders and Product\_returns tables to get total\_orders and total\_returns of each customer and insert the details in the Purchase\_details table for every 4 mins.
2. Use current timestamp for created\_time column