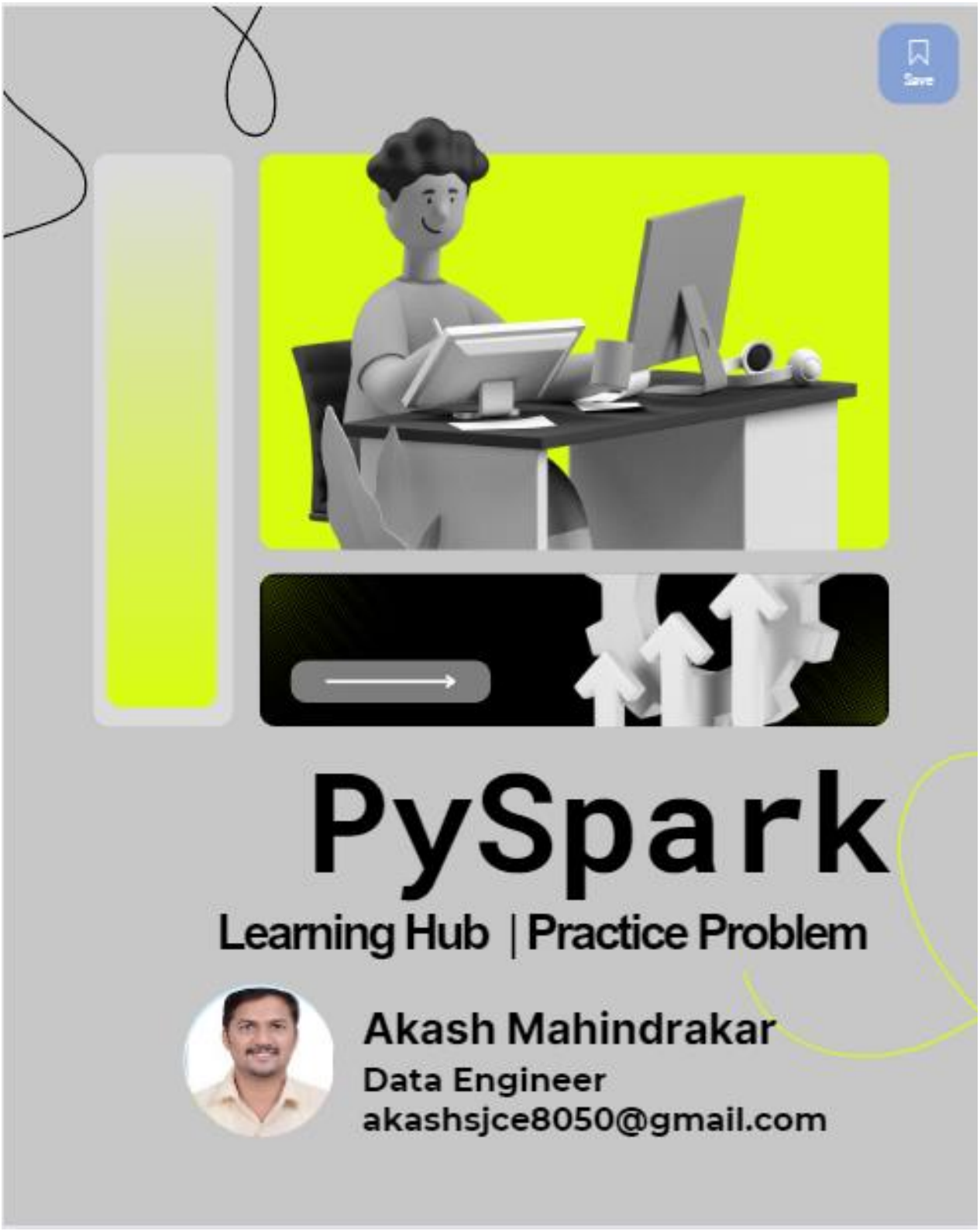
PYSPARK LEARNING HUB : DAY - 13



Step - 1 : Problem Statement

13_Page With No Likes

Write a pyspark code to return the IDs of the Facebook pages that have zero likes. The output should be sorted in ascending order based on the page IDs.

Difficult Level : EASY

DataFrame:

```
# Define the schema for the pages
pages_schema = StructType([
        StructField("page_id", IntegerType(), True),
        StructField("page_name", StringType(), True)
])
# Define the schema for the page_likes table
page_likes_schema = StructType([
        StructField("user_id", IntegerType(), True),
        StructField("page_id", IntegerType(), True),
        StructField("liked_date", StringType(), True)
])
# Create an RDD with the data for pages
pages_data = [
        (20001, 'SQL Solutions'),
        (20045, 'Brain Exercises'),
        (20701, 'Tips for Data Analysts')
]
# Create an RDD with the data for page_likes table
page_likes_data = [
        (111, 20001, '2022-04-08 00:00:00'),
        (121, 20045, '2022-03-12 00:00:00'),
        (156, 20001, '2022-07-25 00:00:00')
]
```

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Step - 2 : Identifying The Input Data And Expected

INPUT

INPUT - 1 PAGES	
PAGE_ID	PAGE_NAME
20001	SQL Solutions
20045	Brain Exercises
20701	Tips for Data Analysts

INPUT - 2 PAGES_LIEKS		
USER_ID	PAGE_ID	LIKED_DATE
111	20001	2022-04-08 0:00:00
121	20045	2022-03-12 0:00:00
156	20001	2022-07-25 0:00:00

OUTPUT

OUTPUT
PAGE_ID
20701

Step - 3 : Writing the pyspark code to solve

```
# Creating Spark Session
from pyspark.sql import SparkSession
from pyspark.sql.types import
StructType,StructField,IntegerType,StringType

#creating spark session
spark = SparkSession. \
builder. \
config('spark.shuffle.useOldFetchProtocol', 'true'). \
config('spark.ui.port','0'). \
config("spark.sql.warehouse.dir", "/user/itv008042/warehouse"). \
enableHiveSupport(). \
master('yarn'). \
getOrCreate()

# Define the schema for the pages
pages_schema = StructType([
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# Define the schema for the page_likes table
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      ]
```

```
page_df=spark.createDataFrame(pages_data,pages_schema)
page_like_df=spark.createDataFrame(page_likes_data,page_likes_
schema)
page_df.show()
page_like_df.show()
```

```
+-------+--------------------+
|page_id|           page_name|
+-------+--------------------+
|  20001|       SQL Solutions|
|  20045|     Brain Exercises|
|  20701|Tips for Data Ana...|
+-------+--------------------+

+-------+-------+-------------------+
|user_id|page_id|         liked_date|
+-------+-------+-------------------+
|    111|  20001|2022-04-08 00:00:00|
|    121|  20045|2022-03-12 00:00:00|
|    156|  20001|2022-07-25 00:00:00|
+-------+-------+-------------------+
```

```
# Perform a left anti join to get pages with zero likes
zero_likes_pages = page_df.join(page_like_df, 'page_id',
'left_anti')
# Select and sort the result
result = zero_likes_pages.select("page_id").orderBy("page_id")
# Show the result
result.show()
```

```
+-------+
|page_id|
+-------+
|  20701|
+-------+
```

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