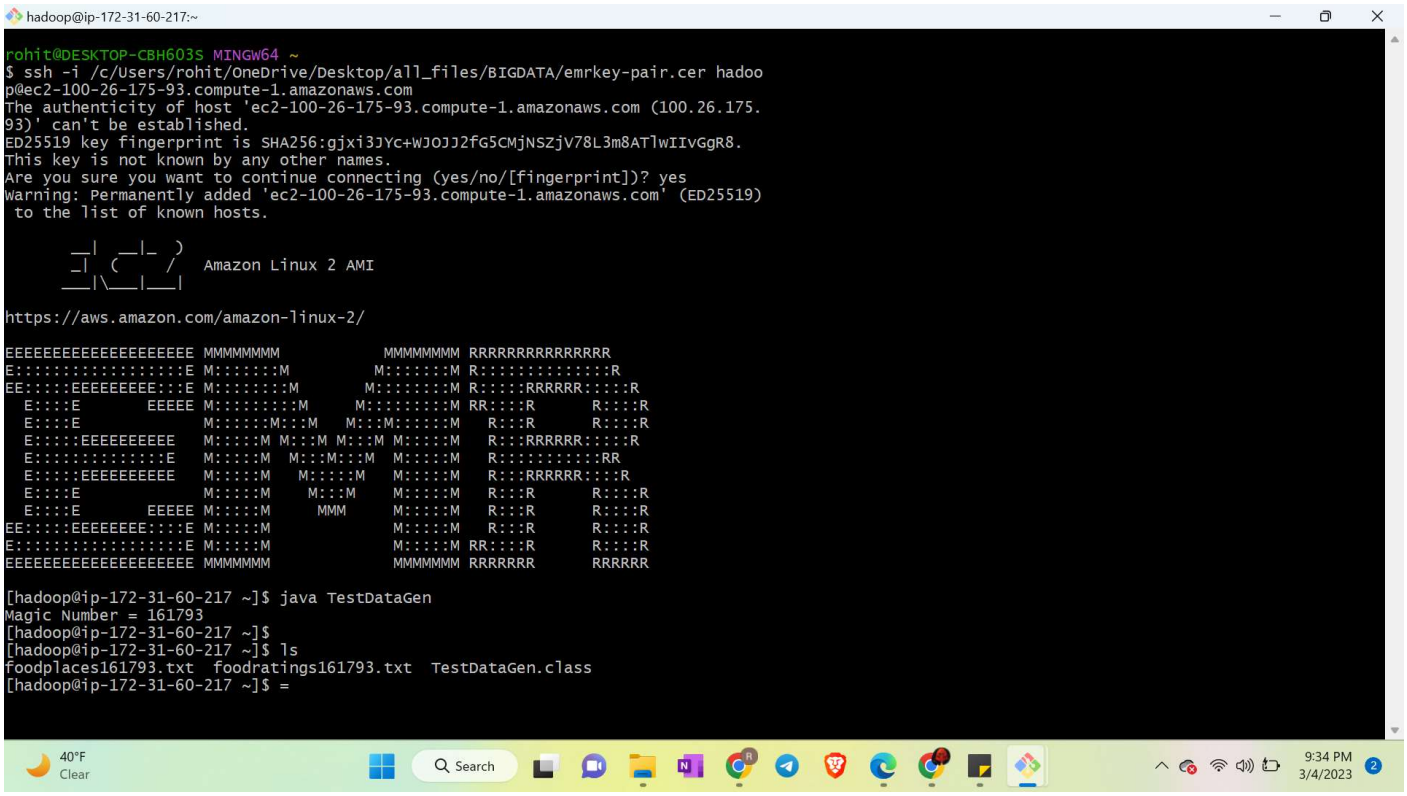
CWID: A20526972

CSP-554 Big Data Technologies

Bairi Rohith Reddy – Assignment 5

Magic Number :



Magic Number = 161793

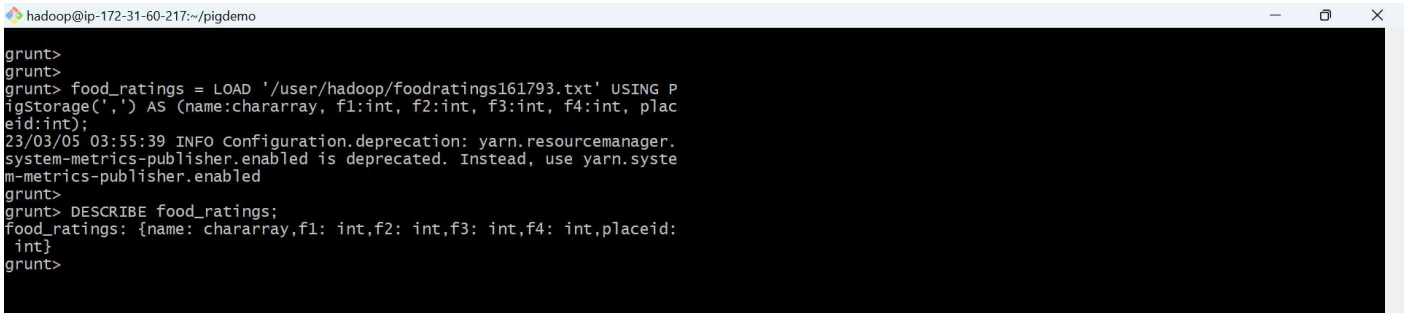
foodplaces161793.txt

foodratings161793.txt

Exercise 1)

food_ratings = LOAD '/user/hadoop/foodratings161793.txt' USING PigStorage(',') AS (name: chararray, f1:int, f2: int, f3:int, f4:int, placeid:int);

DESCRIBE food_ratings;



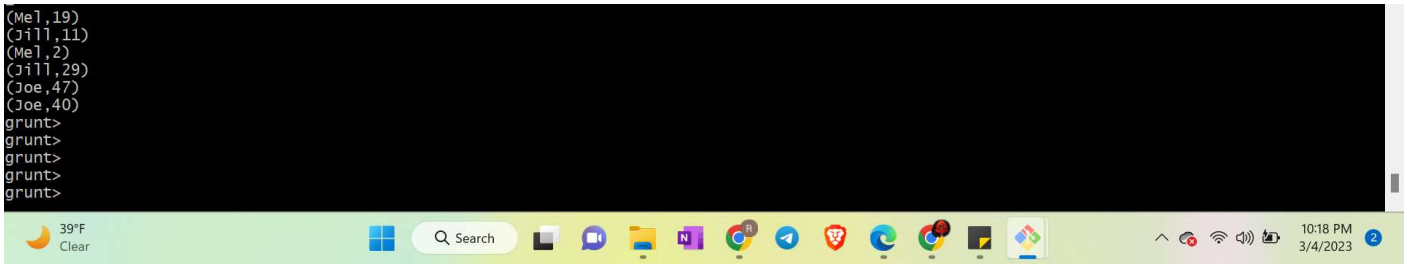
Exercise 2)

food_ratings_subset = FOREACH food_ratings GENERATE name,f4;

STORE food_ratings_subset INTO '/user/hadoop/fr_subset' USING PigStorage(',');

fr_output = LIMIT food_ratings_subset 6;

dump fr_output;



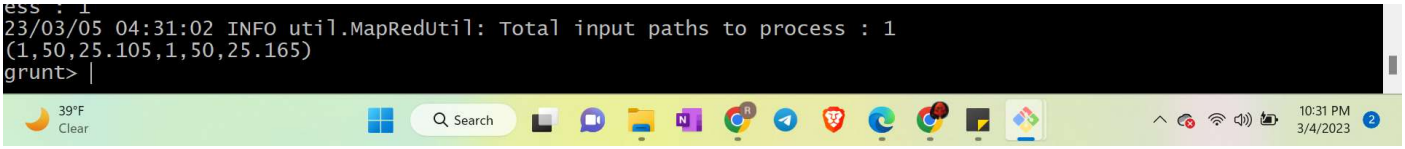
Exercise 3)

fr_profile = GROUP food_ratings ALL;

food_ratings_profile = FOREACH fr_profile GENERATE MIN(food_ratings.f2), MAX(food_ratings.f2),

AVG(food_ratings.f2), MIN(food_ratings.f3),MAX(food_ratings.f3), AVG(food_ratings.f3);

DUMP food_ratings_profile;

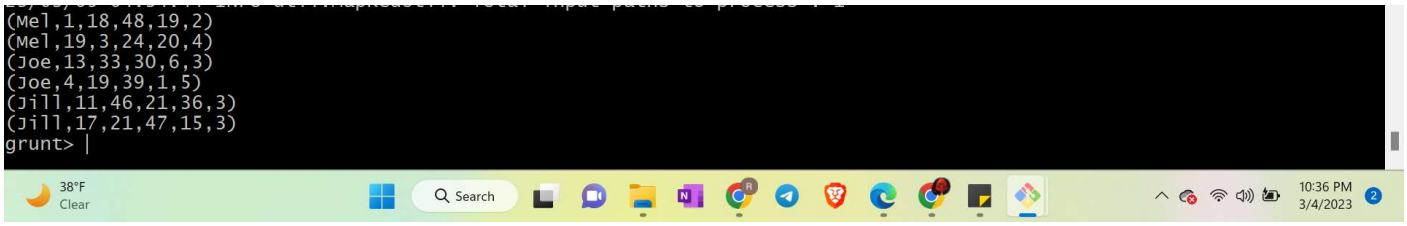


Exercise 4)

food_ratings_filtered = FILTER food_ratings BY (f1<20) AND (f3>5);

fr_filtered = LIMIT food_ratings_filtered 6;

DUMP fr_filtered;

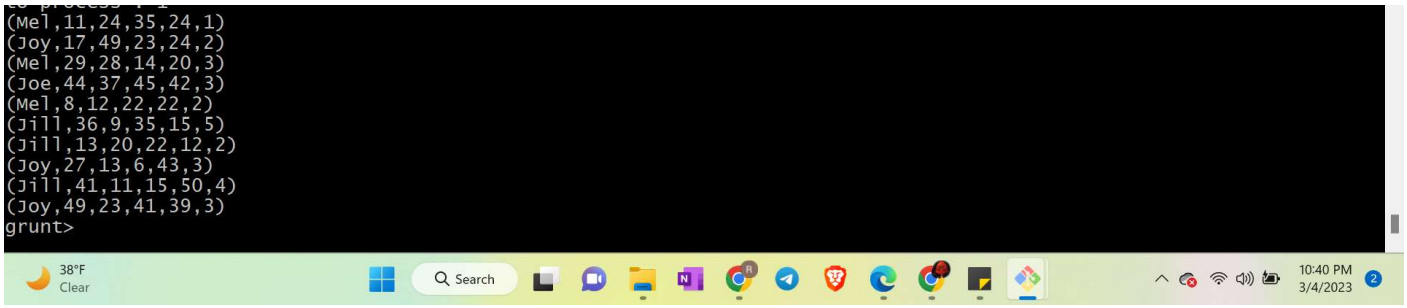


Exercise 5)

food_ratings_2percent = SAMPLE food_ratings 0.02;

filtered = LIMIT food_ratings_2percent 10;

DUMP filtered;



Exercise 6)

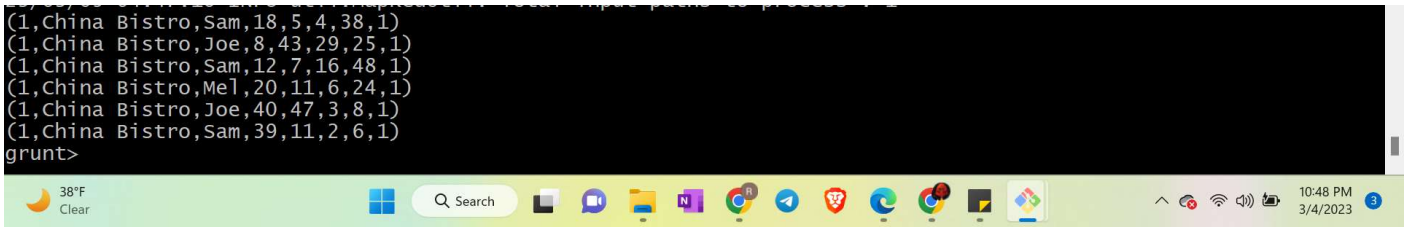
food_places = LOAD '/user/hadoop/foodplaces161793.txt' USING PigStorage(',') AS (placeid: int, placename: chararray);

DESCRIBE food_places;

food_ratings_w_place_names= JOIN food_ratings BY placeid, food_places BY placeid;

fr_result= LIMIT food_ratings_w_place_names 6;

DUMP fr_result;



Exercise 7) (3 points) Identify the one correct answer for each the following questions. These questions are similar to the ones you might find on the mid-term covering Pig. Each is worth ½ point.

1. **Which keyword is used to select a certain number of rows from a relation when forming a new relation?**

   Answer: **LIMIT**

2. **Which keyword returns only unique rows for a relation when forming a new relation?**

   Answer: **DISTINCT**

3. **Assume you have an HDFS file with a large number of records similar to the examples below**
   - **Mel, 1, 2, 3**
   - **Jill, 3, 4, 5**

- **Which of the following would NOT be a correct pig schema for such a file?**

Answer: **(f1, f2, f3, f4)**

4. **Which one of the following statements would create a relation (relB) with two columns from a relation (relA) with 4 columns? Assume the pig schema for relA is as follows: (f1: INT, f2, f3, f4: FLOAT)**

   Answer: **relB = FOREACH relA GENERATE $0, f3;**

5. **Pig Latin is a _____ language. Select the best choice to fill in the blank.**

   Answer: **data flow**

6. **Given a relation (relA) with 4 columns and pig schema as follows: (f1: INT, f2, f3, f4: FLOAT) which one statement will create a relation (relB) having records all of whose first field is less than 20**

   Answer: **relB = FILTER relA by $0 < 20**

Documentation of commands executed

Excercise 1:-

```
food_ratings = LOAD '/user/hadoop/foodratings161793.txt' USING PigStorage(',') AS (name:chararray, f1:int, f2:int, f3:int, f4:int, placeid:int);
DESCRIBE food_ratings;
```

Excercise 2:-

```
food_ratings_subset = FOREACH food_ratings name, f4;
STORE food_ratings_subset INTO '/user/hadoop/fr_subset' USING PigStorage(',');
fr_output = LIMIT food_ratings_subset 6;
dump fr_output;
```

Excercise 3:-

```
fr_profile = GROUP food_ratings ALL;
```

```
food_ratings_profile = FOREACH fr_profile GENERATE MIN(food_ratings.f2), MAX(food_ratings.f2), AVG(food_ratings.f2), MIN(food_ratings.f3), MAX(food_ratings.f3), AVG(food_ratings.f3);

DUMP food_ratings_profile;
```

Excercise 4:-

```
food_ratings_filtered = FILTER food_ratings BY (f1<20) AND (f3>5);

fr_filtered = LIMIT food_ratings_filtered 6;

DUMP fr_filtered;
```

Excercise 5:-

```
food_ratings_2percent = SAMPLE food_ratings 0.02;

filtered = LIMIT food_ratings_2percent 10;

DUMP filtered;
```

Excercise 6:-

```
food_places = LOAD '/user/hadoop/foodplaces161793.txt' USING PigStorage(',') AS (placeid:int, placename:chararray);

DESCRIBE food_places;

food_ratings_w_place_names = JOIN food_places BY placeid, food_ratings BY placeid;

fr_result = LIMIT food_ratings_w_place_names 6;

DUMP fr_result;
```