IST769 Homework Submission Template

Basic Information

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Date Due: September 14, 2021   
Homework #: 10

Your Answers:

1. Write KSQL to create a stream named **weblogs** from the JSON keys in the **weblogs** Kafka topic. Make sure to set the TIMESTAMP property to the timestamp from the stream.

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| CODE |
| CREATE STREAM weblogs (TimeStamp bigint, Browser varchar, OS varchar, Uri varchar, User varchar) WITH (KAFKA\_TOPIC='weblogs', TIMESTAMP='TimeStamp', VALUE\_FORMAT='JSON’);  DESCRIBE EXTENDED weblogs;  SELECT \* FROM weblogs; |
| SCREENSHOT/OUTPUT |
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1. Write a KSQL statement create a persistent stream/table called **homepage** which only displays visitors to the root of the website (/). It should display all columns from the **weblogs** stream.

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| CODE |
| CREATE STREAM homepage AS SELECT \* FROM weblogs WHERE Uri = '/';  SELECT \* FROM homepage; |
| SCREENSHOT/OUTPUT |
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1. Write a KSQL statement to count operating systems users (os) in 60 second windows. After 60 seconds, the counter should reset, and counts should begin again.

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| CODE |
| SELECT OS, COUNT(\*) FROM weblogs WINDOW TUMBLING (SIZE 1 MINUTE) GROUP BY OS; |
| SCREENSHOT/OUTPUT |
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1. Write a KSQL persistent stream/table called **user\_activity** which will display a count of user activity on the website within 1-minute sessions.

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| CODE |
| CREATE STREAM weblogs2 AS SELECT 1 AS Grp, \* FROM weblogs;  CREATE TABLE user\_activity AS SELECT Grp, COUNT(\*) FROM weblogs2 WINDOW TUMBLING (SIZE 1 MINUTE) GROUP by Grp; |
| SCREENSHOT/OUTPUT |
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1. Write a KSQL statement to display users who have more than 1 pages of activity in a 1-minute session.

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| CODE |
| SELECT User, COUNT(\*) FROM weblogs WINDOW TUMBLING (SIZE 1 MINUTE) GROUP BY User HAVING COUNT(\*) > 10; |
| SCREENSHOT/OUTPUT |
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| Code “ran” i.e. did not get an error, but also did not get any output. I modified the code to see if I could get some output): |
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