# **IST769 Homework Submission**

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Due Date: **09/14/2021**

Task: **Kafka and KSQL**

Homework #:**10**

**Exercise(s):**

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.

**Solution:**

-- Create Weblogs STREAM

CREATE STREAM weblogs (timestamp bigint, browser varchar, OS varchar, uri varchar, user varchar) WITH (kafka\_topic =’weblogs’, timestamp =’TimeStamp’, value\_format =’JSON’);

**Evidence:**

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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.

**Solution:**

-- KSQL Statement to create a persistent stream

CREATE STREAM homepage as SELECT \* FROM weblogs WHERE uri =’/’;

-- View the data

SELECT \* FROM homepage;

**Evidence:**

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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.

**Solution:**

-- KSQL statement to count the number of operating system users in 60 second window

SELECT OS, count(user) as users\_count from weblogs WINDOW TUMBLING (size 60 seconds) GROUP BY OS;

**Evidence:**

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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.

**Solution:**

-- create KSQL Persistent stream/table

CREATE TABLE user\_activity as SELECT user, count (\*) as user\_activity from weblogs WINDOW TUMBLING (size 60 seconds) GROUP BY user;

**Evidence:**

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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.

**Solution:**

-- Display results

Select \* from user\_activity where user\_activity > 1;

**Evidence:**

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# **Appendix**

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Graphical user interface, text, application

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A screen shot of a computer

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Graphical user interface, text

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Graphical user interface, text, application, Teams

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A picture containing rectangle

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Graphical user interface, text

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Graphical user interface, application

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