МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ "Харківський політехнічний інститут"

Кафедра	комп	'ютерної	математи	ки та	аналізу	даних

"Методи та технології роботи з великими даними"

Звіт до лабораторної роботи Apache Kafka

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_Инструкция по установке и запуску Apache Kafka on Windows

- 1. Перейдите по ссылке: https://www.apache.org/dyn/closer.cgi?path=/kafka/3.6.0/kafka_2.13-3.6.0.tgz_и скачайте установочный файл.
- 2. Распакуйте архив на диск С и переименуйте папку "kafka_2.13-3.6.0" в "kafka" для удобства.
- 3. Откройте терминал и перейдите в директорию с Apache Kafka с помощью команды:

cd C:\kafka

- 4. Для начала запустите "Kafka environment" (Запуск службы ZooKeeper). Выполните команду:
 - .\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
- 5. Затем запустите "Kafka broker service". Выполните команду:
 - .\bin\windows\kafka-server-start.bat .\config\server.properties
- 6. Создайте топик с именем "topic_demo_bitcoin" для сохранения событий (транзакций биткоина): .\bin\windows\kafka-topics.bat --create --topic topic_demo --bootstrap-server localhost:9092
- 7. Создайте пустую директорию и выполните команду: git clone https://github.com/7Lancelot7/Laba2 Apache Kafka.git и в этом проекте запустите исполняющий файл main.py

Примеры результата работы:

Получение данных с bitstamp.net.

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Received:

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{"data":{"id":1675465069391873,"id_str":"1675465069391873","order_type":0,"datetim e":"1697884064","microtimestamp":"1697884063864000","amount":0.01678754,"amount_str":"0.01678754","amount_traded":"0","amount_at_create":"0.01678754","price":29 780,"price_str":"29780"},"channel":"live_orders_btcusd","event":"order_created"} Received:

{"data":{"id":1675465069465600,"id_str":"1675465069465600","order_type":1,"datetim e":"1697884064","microtimestamp":"1697884063882000","amount":0.00867853,"amou nt_str":"0.00867853","amount_traded":"0","amount_at_create":"0.00867853","price":29 788,"price_str":"29788"},"channel":"live_orders_btcusd","event":"order_created"} Received:

 $\label{eq:continuous} $$ {\data}: {\$

Новые отсортированные топ 10 транзакций записанные в Kafka.

```
C:\kafka>.\bin\windows\kafka-console-consumer.bat --topic topic_demo_bitcoin_b --from-beginning --bootstrap-server localhost:9092 (*id*: 1675465083777920, "id_str": "1675465083777920, "order_type": 1, "datetime": "1697884065", "microtimestamp": "169788406458900", "amount: 0.0884, "amount_str": "0.88460600", "amount_str": "0.88460600", "order_type": 1, "datetime": "1697884064", "microtimestamp": "1697884063882000", "amount="0.08867853", "amount_str": "0.08667853", "amount_traded": "0", "amount_at_create": "0.08867853", "pice": 29788, "price_str": "29788" } ("id": 1675465060465600, "id_str": "1675465069465600", "order_type": 1, "datetime": "1697884064", "microtimestamp": "1697884063882000", "amount_str": "0.08867853", "amount_str": "0.08867853", "amount_traded": "0", "amount_at_create": "0.08867853", "price": 29788, "price_str": "29788" } ("id": 1675465070174208, "id_str": "1675465070174208", "order_type": 1, "datetime": "1697884064", "microtimestamp": "16978840640855000", "amount": 0.08867853, "amount_str": "0.08667853", "amount_traded": "0", "amount_at_create": "0.08667853", "price": 29788, "price_str": "29788" } ("id": 1675465070174208, "id_str": "1675465070174208", "order_type": 1, "datetime": "1697884064", "microtimestamp": "16978840640455000", "amount": 0.08867853, "amount_str": "0.08867853", "amount_str": "0.08867853",
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