**Constructing a Web Server Using Kafka**

The Project24\_3\_Kafka folder was downloaded and extracted.

A computer screen shot of a blue screen

Description automatically generated

Docker Desktop was opened, and the CPU and memory were set to a minimum of 12 GB as shown in the provided screenshot.

A screenshot of a computer

Description automatically generated

The Kafka Docker container components were created, and the required Kafka container components were confirmed to be up and running in Docker Desktop.

A screenshot of a computer

Description automatically generated

The Confluent Control Center web interface was accessed, and a screenshot was provided showing the healthy status of the cluster.

A screenshot of a computer

Description automatically generated

The existing default topics in the Confluent Control Center were viewed, and a screenshot was provided.

A screenshot of a computer

Description automatically generated

A new topic titled "vehicle-coordinates" was added in the Confluent Control Center, and a screenshot was provided showing the topic with the correct settings.

A screenshot of a computer

Description automatically generated

The **kafka-python** package was installed using pip, and a screenshot showing the successful installation was provided.

A screenshot of a computer screen

Description automatically generated

The **PublishVehicleCoordinates.py** file was opened in VS Code, and a screenshot was provided showing the template for defining the producer.

A screen shot of a computer program

Description automatically generated

Modifications were made to the **PublishVehicleCoordinates.py** file as instructed, and a screenshot was provided showing the correct modifications.

A screen shot of a computer program

Description automatically generated

The Python code in the **PublishVehicleCoordinates.py** file was run from the command prompt, and a screenshot was provided showing the produced longitude and latitude data.

A screen shot of a computer

Description automatically generated

Node.js was installed, and a screenshot was provided showing the returned Node.js version number after running the **node --version** command.

A screenshot of a computer screen

Description automatically generated

The **PublishVehicleCoordinates.py** file was moved inside the NodeJSConsumer folder, and modifications were made to the **server.js** file.

A screen shot of a computer program

Description automatically generated

The **node-rdkafka** library was installed using npm, and a screenshot was provided showing the successful installation.

A screenshot of a computer

Description automatically generated

The **node server.js** command was run, and a screenshot was provided showing the displayed web page.

A screen shot of a computer

Description automatically generated

The web page titled "Confluence Kafka REST" was accessed, and a screenshot was provided showing the page with a "Consume Vehicle Coordinates" button.

A screenshot of a computer

Description automatically generated

The "Consume Vehicle Coordinates" button was selected, and a screenshot of the console was provided showing the consumed data without any errors.

A screenshot of a computer

Description automatically generated