```
-- Assign the database schema
use schema medisnowdb.public;


-- Create training table with prompts (complaint details) and completions (business unit)
CREATE OR REPLACE TABLE model_train AS
SELECT c.complaintdetails AS prompt, d.businessunit AS completion
FROM customer_complaints c
JOIN devices d ON c.DEVICENAME = d.DEVICENAME;

-- Create validation table (optional) to monitor fine-tuning progress
CREATE OR REPLACE TABLE model_validation AS
SELECT c.complaintdetails AS prompt, d.businessunit AS completion
FROM customer_complaints c
JOIN devices d ON c.DEVICENAME = d.DEVICENAME;

-- Validate the prompt format for fine-tuning
SELECT concat('What business unit manufactured the device in this customer complaint text? ', prompt) AS prompt,
completion
FROM model_train;



-- Initialize the Model Finetuning process in Snowflake
-- We're using the 'CREATE' action to start a new finetuning job

SELECT SNOWFLAKE.CORTEX.FINETUNE(
    'CREATE',                           -- Action: Create a new finetuning job
    'device_llama3_8b',                 -- Model Name (unique identifier for this job)
    'llama3-8b',                        -- Base Model (the pretrained model to finetune)
    'SELECT CONCAT(''What business unit manufactured the device in this customer complaint text? '', prompt) AS prompt,
completion FROM model_train', -- Training Data SQL (query to get prompts and completions)
    'SELECT CONCAT(''What business unit manufactured the device in this customer complaint text? '', prompt) AS prompt,
completion FROM model_validation'  -- Validation Data SQL (optional, for evaluating model during training)
);

/*

Monitor Finetuning Progress

The following commands are used to check the status of your finetuning jobs:

-- SHOW: Lists all active finetuning jobs
SELECT SNOWFLAKE.CORTEX.FINETUNE('SHOW');

-- DESCRIBE: Provides details about a specific finetuning job (replace with actual ID)
SELECT SNOWFLAKE.CORTEX.FINETUNE(
    'DESCRIBE',
     'CortexFineTuningWorkflow_e2d76557-9956-4a88-b287-b3e7b14e987b'
);
*/


/*
Important Notes:

* Naming Conventions: Model names should use only underscores (_), not hyphens (-).
* Validation: The validation data table is optional. You can train without it.
* Finetuning Time: This process can take a while depending on your model, data size, and Snowflake resources. Be
prepared for potentially significant wait times.
* Monitoring: Use the 'SHOW' and 'DESCRIBE' commands to track progress and investigate issues.
* Further Actions: Once finetuning is complete, you'll typically use additional commands to deploy and utilize your fine-
tuned model.
```