Testing Instructions

1. Test IoT Hub

1. **Simulate Device Messages:**
    - Use Azure IoT Explorer or any IoT simulator.
    - Send the following message to IoT Hub:
    - {
    - "soil_moisture": 55.5,
    - "water_level": 80.0
    - }
2. **Monitor in Azure IoT Explorer:**
    - Navigate to your IoT Hub > **Message Monitoring**.
    - Verify the messages are received.

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2. Test Stream Analytics

1. **Ensure the Job is Running:**
    - Go to your Stream Analytics Job > **Overview** > **Start**.
2. **Verify Cosmos DB Integration:**
    - Go to Cosmos DB > **Data Explorer**.
    - Verify that messages sent to IoT Hub are processed and stored in the TelemetryData container.

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3. Test Azure Functions Locally

1. **Run Locally:**
    - Open VS Code and navigate to your function app folder.
    - Run func start in the terminal.
2. **Test Endpoints in Postman:**
    - **GET Request**:
    - URL: http://localhost:7071/api/GetDeviceData?user_id=user_1&device_id=SoilSensorSimulator1
        - Verify the response contains data for the specified user and device.

- **POST Request**:
- URL: http://localhost:7071/api/UpdateDeviceData
- Method: POST
- Body: (form-data)
- - user_id: user_1
- - device_id: SoilSensorSimulator1
- - soil_moisture: 60
- - water_level: 70

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4. Test Deployed Function

1. **Use Azure URL:**
    - Replace localhost with your Azure Function App URL:
    - URL: https://<your-function-name>.azurewebsites.net/api/UpdateDeviceData
2. **Test in Postman:**
    - Same as above, but ensure you include the function key in the query string:
    - URL: https://<your-function-name>.azurewebsites.net/api/UpdateDeviceData?code=<your-function-key>
