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| **Id** | **Name** | UC-001 | Read Temperature and Pressure from BMP280 | |
| **Goal** | | To read temperature and pressure data from the BMP280 sensor and publish it via MQTT | | |
| **Pre-condition** | | The BMP280 sensor is connected and initialized. The MQTT broker is accessible | | |
| **Post-condition** | | Temperature and pressure data are published to the specified MQTT topic. | | |
| **Actors** | | User (Raspberry Pi operator), BMP280 Sensor, Raspberry Pi Zero 2 W, MQTT Broker | | |
| **Triggering event(s)** | | The application starts and requests sensor data. | | |
| **Cross-references** | | UC-002: Connect to MQTT Broker, UC-003: Initialize BMP280 Sensor | | |
| **Description** | | **Actor** | | **System** |
| User initiates the application | | The system initializes the BMP280 sensor |
| User requests to read temperature | | The system reads temperature data from BMP280 |
| User requests to read pressure | | The system reads pressure data from BMP280 |
| User publishes the data | | The system sends the data to the MQTT broker |
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| **Extensions** | | If the BMP280 fails to initialize, return an error message | | |
| **Alternatives** | | User can opt to log data instead of publishing to MQTT | | |