

## Assignment 4 – ITEC275 – Offline Data Storage & Synchronization

As a group you will:

- Design a schema to store data.
  - Develop a plan and implement a program to collect data locally.
  - Synchronize data with a SQL Server database when a connection is available.
  - Display the data.
  - Present the designed architecture and working software application to the class.
1. Build the schema to store data.  
**[2 marks]**
  2. Local data collection, storage and processing.  
**[4 marks]**
  3. SQL Server synchronization strategy and implementation.  
**[4 marks]**
  4. Business Intelligence dashboard to analyze and display the collected data.  
*This application should be built as a standalone application, not included in the data collection application.*  
**[4 marks]**
  5. Class Presentation.  
**[6 marks]**

Data should be inspected to determine a proper schema for any databases. The header for the generated file is included here:

DeviceName, DeviceType, TimeStamp, UnitOfMeasure1, UnitOfMeasureValue1, UnitOfMeasure2, UnitOfMeasureValue2

The data generation program will be provided for testing. Only four device types exist: GPS, Electric, Water, Gas.