SIT314/SIT729 – Week 4 Group Activity  
Designing Smart IoT Solutions

short line

# Overview

# IoT applications often contain many parts, including data collection with sensors, data aggregation, filtering, storage, analysis, and eventually actuation in the environment such as switching a light on or turning a machine on. This activity is to think about a complex IoT application and design the IoT workflow for it.

# Tasks

You should design the IoT flow for a `transport system for a smart city`.

When thinking about this, think about Sense-Think-Act.

A diagram of a circular cycle

AI-generated content may be incorrect.

1. Sketch a block diagram of the system.
2. What are all the physical objects in the space (cars, people, traffic lights)?
3. What is the data that is generated from sensors (car locations, traffic)?
4. What are the actuations of the system (traffic lights, car navigation, train speeds)?
5. What are the processes and decisions that need to be made to connect the sensors to the actuators?
6. Plan a hierarchical MQTT application-level communications protocol. Think about the identity of users and devices in the system and plan single-level or multi-level wildcards for message filtering.