Pass Task 18 – Planetary Rover

Related Learning Outcomes

ULO1 – Explain the OO Principles

This exercise demonstrated object encapsulation which creation of each individual private and public data such as object class. Other subclasses such as drill class inherit the property of device class. The object class are access by other class to inherit its properties.

ULO2 – Use OO Language and Library

Demonstrated class and constructor declaration, the use of conditional statements (e.g. “if”), and assigning values to parameters. std::random_device and `mt19937 mt(rd())` are used to generate random integer for solar panel class. Uses c++ iteration loop to scan and clear all the devices.

ULO3 – Design, Develop and Test using an IDE

The code was developed using Visual Studio to build and run the program, as well as integrated debugging features to step and inspect values. TestRover.cpp are used to make sure program run well, I’ve created a few test to test all the device, detach and attach of device and battery.

ULO4 – Communicate using UML Diagrams

I learned how to interpret a UML class diagram and write the related code.

ULO5 – Describe Elements of Good OO Design

The exercise demonstrated correct use of C++ coding conventions.