

Pass Task 16 – Planetary Rover

Related Learning Outcomes

ULO1 – Explain the OO Principles

This exercise demonstrated object encapsulation teaching me about how you can make features either public or private to only exist within the object. The topic taught me to convert abstract plans such as UML diagrams from the last exercise into actual code to use. The exercise used a lot of polymorphism to share the class from the Device object to the Drill, Sonar and Radar. The task required inheritance to pass down methods and fields such as Operate, attach, etc.

ULO2 – Use OO Language and Library

Demonstrated class and constructor declaration, the use of conditional statements (e.g. “if”), and assigning values to parameters. The task examines how fields can be used by an object to remember information. We used a Property to get the Battery Charge and be able to access it outside the object. This exercise used namespace std, vector and iostream to access features such as lists and sending text to the console.

ULO3 – Design, Develop and Test using an IDE

The code was developed using netbeans to build and run the program, as well as added cppunit debugging features to step and inspect values. cppunit was used for the unit testing for the Rover, devices and battery classes.

ULO4 – Communicate using UML Diagrams

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

ULO5 – Describe Elements of Good OO Design

The exercise demonstrated correct use of C++ coding conventions including proper naming, syntax and correct layout.

Screenshots

[use of IDE]

