Worksheet 4
Object Oriented Programming

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Object oriented programming is defined as

> *using a methodology which enables a system to be modelled as a set of objects which can be controlled and manipulated in a modular manner.*

This means that complex situations can be broken down and implemented in managable peices and allows code to be grouped into semantically related sections.

Object oriented programming is designed to address the issue of code re-use in larger programming projects. Even at the smaller level, re-implementation of code wherever it is needed leads to problems, for the developer, the maintainer and, ultimately, the end user.

For the developer not using an object oriented technique, as they are creating a program, they must continually re-write code that they want to use from a part of the program not directly connected to the current section.

For the maintainer, the act of updating the code written by the developer becomes far more difficult. Every time the developer had to duplicate some code, the fixes, updates or changes that are made to that code must also be duplicated throughout the project. This redundancy can easily lead to different implementations and a lack of consistency, causing confusion later on and mistakes, meaning the code simply does not work.