



# Object Oriented Programming

## Pass Task 7.1: Object Oriented Principles

### Overview

**Note:** If you are going to complete the concept map task, you can use that illustration as the basis for this report. In this case, your report need only explain your diagrams and relate what is shown to the object oriented programming principles.

You have been using object oriented programming to implement the programs you have created in this unit. In this task you need to express your understanding of the principles associated with this programming paradigm (abstraction, encapsulation, inheritance, and polymorphism).

- Purpose:** Express your understanding of how the programming artefacts, tools, and concepts relate to each other.
- Task:** Write a short explanation of object oriented programming to outline your understanding of the associated principles and tools, and how they are used to create programs.
- Time:** This task should be completed before the start of week 8.
- Resources:**

### ***Submission Details***

You must submit the following files to Doubtfire:

- A PDF document with your description

Make sure that your task has the following in your submission:

- Explanation should clearly demonstrate a good understanding of the structured programming principles and how they relate to the development of software.
- The report is your work and expresses your understanding in your own words. Where ideas and descriptions are related to other people they are appropriate cited and referenced.

## Instructions

To make the most of programming, you need to deeply understand the principles that underly the paradigm that you are using.

For this task you must **explain** the principles of object oriented programming and **relate** these to the programs you have created.

**Note:** Explain is more than just a description, you want to convey a deeper understanding that can be achieved with a simple description. Try to relate the principles together and express the depth of your understanding.

**Tip:** A deep explanation does not need to be a long one. Aim to convey your understanding in a concise fashion.

Create an article / blog post / letter to a friend / comic / movie / podcast / etc that explains the principles of object oriented programming, as you understand them, and outline what qualities you should look for in good object oriented programs.

1. Keep it to about 1 or 2 pages of text (if text based)
2. Videos or podcasts should be kept as short — but still demonstrate depth of understanding.
3. Creativity will be valued

**Tip:** Including references to textbooks (not wikipedia) or research papers can help you strengthen your explanation. Remember to reference other peoples work.

Make sure your explanation covers the following:

Concepts and Principles		Programming Artefacts	
Abstraction	Encapsulation	Class	Method
Inheritance	Polymorphism	Object	Fields
Roles	Responsibilities	Interface	
Collaborations	Coupling		
Cohesion			

**Relate** these to programs **you** have written in this unit.