**LO1:  Explain the principles of Object-Oriented Programming**

*1.1* *Explain the key features of object oriented programming.*

*1.2* *Explain the importance of encapsulation, inheritance and polymorphism in object oriented programming.*

Create a formal report that explains the basic principles of Object Oriented Programming. (OOP). Your reports should include:

# Principles of Object Orientated Programming

OOP is a programming paradigm based around the use of Objects – which contain both data and the code for manipulating the data. An object is a data structure which has both fields (also known as members, attributes or properties) and methods (actions, subroutines or procedures).

Can model real world objects

Class vs object

**Inheritance** – we can reuse code and properties from other objects. Related objects are able to use the properties of a parent object while extending or replacing other functionaliy. This code reuse…..

**Polymorphism** - gewewrge

**Encapsulation** – all information is stored within the object, and only selected information is available externally to it. Other objects are not allowed to make changes to the internal data and must ask the object to make any changes through the use of public properties and methods. This provides greater data security and integrity as the object can determine if any data change is appropriate and allowable.

**Abstraction** - eteerterere

Objects are … work together…. Passing information…

Modules.

Benefits of oop

Reusability

* Key features:
* discrete, reusable units of programming logic
* identification of objects
* data abstraction
* modularity
* classification
* inheritance
* polymorphism
* encapsulation
* classes
* methods
* message passing.

Suggested wordcount: 1200 words.