**[PROG8180] Assignment 1**

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* 1. Abstraction: it defines the essential characteristics of an object, defining them, making the object distinct from the others but still providing only the concepts.
  2. Encapsulation: everything you need is inside the specific object. The data implementation is hidden and it’s only accessible through some public methods.
  3. Inheritance: the ability to pass from parent class to child class properties and methods for example.

Ex. Person class and Student class. Person has name, phone number and Student as a Person has the same properties and also student ID.

* 1. Polymorphism: means many forms. Multiple methods with the same name, performing the functions slightly different one from another.

Ex.

Class Shape {

abstract draw();

}

Class Circle {

draw{}

}

1. Key benefits:

Code reuse:

1. fast development time
2. easier to debug
3. faster upgrades