LARGE SCALES ASSIGNMENT 1

1. a. A class is a unit of abstraction in an object oriented program, it represents similar objects which are instances of said class. In other word they contain to the definitions and declarations which give these objects the rules or working.

b. An object is an instance of a class, it has behaviour and properties/attributes, that are special to it and can be used to perform functions and tasks.

c. Encapsulation is the process where the actual implementation details of a class or data structure is hidden and all the user knows is how the class/structure is supposed to work and what it can do, but know how it does this.

d. Inheritance is where one class inherits all the public/protected attributes and methods from another class and can use them. Formal definition: the implicit possession by all subclasses of features defined in the super class.

e. Polymorphism is a way to allow an absolute operation to be performed in different ways in different classes. In other words a way to have 2 methods/functions with the same name be able to do different things.

1. Classes:
2. Customers – This class will define the customers of the business and will be given attributes to represent all the details that the business requires for customers.
3. Orders – This class will define an order and will be given all the features of and order so that it can accurately represent the order of the customers and keep everything detailed and well documented.
4. Products – This class will define the products and will be given all the features to represent what is needed to help keep track of the products being sold/offered to the customer in this business.
5. Attributes:
6. Customers: Names, Address, Number and ID Number.
7. Orders: Order Number, Date, Shipping Mode, Status, Item (Product Category, Number of Products and Products Names).
8. Products: Name, Description, List Price, Category, Warranty, Supplier/Distributer, URL link, Weight, Availability and Location.
9. Methods:
10. Customers – Make New Customer, Edit/Update Customer, Delete Customer and Search Customers.
11. Orders – Make New Order, Cancel Order, Search/Check on Order, Edit/Update Order, and Archive Order.
12. Products – Add Product, Delete Product, Search Product, and Edit/Update Product.
13. Inheritance: The Make New/Create and Delete methods can be inherited and modified to suit the different class and the Name attribute can be inherited as well.