Please .zip your files into one file - keep the directories clearly marked as described in lab and keep files well organized.

1. Explain the 4 Principles of Object Oriented Programming

2. Explain 3 key benefits of having these principles.

3. Write a solution to allow Conestoga Pizzeria to accept orders through their web site.  The web form should be written using html5, css and javascript and should be well formatted and valid html / css (<https://validator.w3.org/>).  The Back end portion of the solution can be in any language that your prefer (suggestions would be either php or nodejs)

**The Form should contain 2 sections:**

1 - User can input their personal details (including name, address (postal, city, province), telephone and email address)

2 - Order Information (Pizza details include size (small, med, large and x-l), crust types (hand-tossed, pan, stuffed, thin) and toppings (include a minimum of 10 possible toppings))

**Additional Rules:**

A small pizza costs $5, medium is $10, Large is $15 and X-L is $20.  The first topping is free, but additional toppings are $0.50 each.

Stuffed Crust costs $2 extra

Pizzeria locations include Ontario, Quebec, Manitoba and Saskatchewan, each with different tax rates, which should be taken into account when processing the order.

Once the order has been successfully submitted, display a summary to the user along with an informative message that the order has been submitted.

Use your favourite back-end language to accept the form input and store the order to a structured text file.

**Notes:**

\* The input is to be completely validated (e.g. city cannot be left empty, postal code must be of the correct format, etc.) using client-side and server-side solutions.

\* Layout for multiple devices is important, implement a mobile first design, however layout should look great on large screens - on desktop sized screens, ensure the 2 form sections are side by side, however on mobile ensure they are in a single column (making use of the full screen size).

**1. Explain the 4 Principles of Object Oriented Programming**

* Abstraction: it is the implementation of an object which contains the same properties and actions so as to use it many times rather than repeat the code.
* Encapsulation: the internal fields should be hidden from outside of object’s definition unless it necessary. Generally, only the Class its own methods can directly access its fields.
* Inheritance: this help to establish a subtype from an existing Class so as to reduce the repetition of the code.
* Polymorphism: This helps method or functions to have slightly different functionality with same name in the Class.

**2. Explain 3 key benefits of having these principles.**

* The Encapsulation can reduce the system complexity and to have low coupling because it limit the access between different Object.
* With the advantage of polymorphism and inheritance, we can define different behaviors in different instances. The behavior depends on the data types used in the operation. This make a function to have many form. Also, the name of this mothed will be easier to understand.
* By well defining the data abstraction and encapsulation, the Class can have high cohesion and low coupling. The object itself can be reuse and scalable.