WEEK 5 CODING RESEARCH ASSIGNMENT

1) What are the four pillars of Object-Orientated Programming? Explain each pillar.

Abstraction - Only show the necessary information. The user only knows that it works not how it works.

Encapsulation - Means to combine a large amount of information into a certain spot, like a class. The information will only be accessed in certain ways so all the information is not out in the open.

Inheritance - Means to inherit properties from a parent. It will take parts from the parent class.

Polymorphism - The child who inherits properties from the parent will still change those properties to fit themselves.

2) What is the relationship between a Class and an Object?

Understanding the difference between classes and objects is easiest understood to myself by visualizing. An object is a real world entity like a human, dog, car. A object would be a particular human, like George. A particular dog, like Sage the 2 year old German Shepherd. Or even a particular car like George's 2005 Mercedes Benz S500. Object is created when its needed versus class is only one time. Another point is that memory is used when it needs it versus class doesn't allocate any memory when its created.

5) What is an exception?

An exception is when something happens and the system needs to come up with some code to to handle the system so that it doesn't shut down. If the system can't find a exception handler it will shut down.

6) What are the differences between checked and unchecked exceptions?

Exceptions allow you to handle run time errors. Checked exceptions are not checked until compile time vs unchecked exceptions are checked at runtime.

(https://en.wikipedia.org/wiki/Object-oriented_programming)
(https://docs.oracle.com/javase/tutorial/essential/exceptions/definition.html#:~:text=Definition: An exception is an,off to the runtime system.)
https://www.javatpoint.com/exception-handling-in-java