Week 7 Research

1. Research the SOLID principles of Object-Oriented Programming (OOP) as introduced by Robert Martin

      The solid principles where introduced to made OOP easier to read, understand and maintain. These principles include Single-responsibility, Liskov substitution, Open-close, interface segregation and dependency inversion. First I will go over the Single-responsibility principle, this principle is the idea that each class should only have one responsibility. That responsibility can be anything from creating a connection to a database to calculating and storing values of a shape. Another principle is the Open-close principle, what these means is that software developed should be open for extension but closed for modification meaning that you can implemnt code that extends the ability of your code but not complete changer it. The third principle is Liskov Subsitution, sustanability is the object of this principle sustanability making it so classes that are created are able to be extended without breaking the program. The second to last principle is interface sergrigation, this idea makes it so a program doesn't need to use a class with a bunch of methods that your program doesn't use and encurges the design of small classes so when you program the program only knows of the methods that it is actually using. Finally the last principle is Dependency inversion meaning that if you have a class that is using methods from another class you have built you shouldn't have to import that class but rather you should extend that class and make it a part of the classes main function using generic methods.

2. What are wildcards in MySQL? How are they useful?

      A wild card is used in MySQL after a LIKE operator and a LIKE operator is used after a WHERE operator. This allows you to query results based of off what is contained in a certain column within the database. For example we are looking for information in a database for the year of 2023 we can create a statement that looks like this

Select * from dataTable where like date = '%2023%'

This will look at the table and show any row that has a date containing 2023

Sources:
- https://en.wikipedia.org/wiki/SOLID
- https://www.w3schools.com/mysql/mysql_wildcards.asp#:~:text=MySQL%20Wildcards,-%E2%9D%AE%20Previous%20Next&text=A%20wildcard%20character%20is%20used,specified%20pattern%20in%20a%20column.