

## Week 5: Research

### Prompts

1. What are the four pillars of Object-Oriented Programming? Explain each pillar.
2. What is the relationship between a Class and an Object?
3. What is an exception and what are best practices for handling them?

### Instructions

As developers, research is a constant part of our job. A common saying is that 90% of software development is Googling, and while that is an exaggeration, Google is a highly used tool in the role. This Research assignment is meant to go beyond the course curriculum and increase your understanding of relevant topics while exposing you to online resources you'll frequently use on the job. Please write a paragraph for **two (2)** of the above prompts and include URLs from where you found the information to cite your sources. Do not copy and paste text from the internet or any other source; use the information you find in your research, summarize, in your own words, the concepts. Plagiarism will result in a zero for the assignment as well as disciplinary actions.

### Prompts 2 & 3:

The relationship between a class and object can be viewed like a blueprint and a copy of that blueprint. When creating classes, they are templates for our objects, what we want our objects to look like and how to behave. This relationship is like that of parent and child, where the child will inherit traits from the parent. An exception is an object with an error or an exception of what is supposed to be happening. This might happen if the user provides invalid input or if the server times out. Best practices for exceptions are Exception Handling or ensuring the program doesn't crash and the error gets handled and the application continues running. In JavaScript this could be done by using try catch statements to wrap around the code that might cause the exception. One thing to note, Exception Handling is more so for something that is outside of our control not for poorly written code.

### Sources:

<https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Classes>

<https://www.freecodecamp.org/news/an-intro-to-object-oriented-programming-in-javascript-objects-prototypes-and-classes-5d135e7361b1/>

<https://www.scaler.com/topics/difference-between-class-and-object/>

<https://www.scaler.com/topics/exception-handling-in-javascript/>

<https://www.knowledgehut.com/blog/web-development/javascript-handling-errors>

<https://www.section.io/engineering-education/exception-handling-in-javascript/>