Assignment 9-10-2024

1. **Explain Pointers:**
   * What is a pointer in C?
   * How does a pointer differ from a regular variable?
2. **Pointer Operations:**
   * Describe pointer arithmetic.
   * What is the difference between \*ptr, ptr, and &ptr?
3. **Pointer Types:**
   * What is a NULL pointer?
   * Explain the concept of a pointer to a pointer.
4. **Common Pointer Errors:**
   * What causes a segmentation fault related to pointers?
   * How can you prevent memory leaks when using pointers?

**Coding Exercises**

1. **Basic Pointer Usage:**
   * Write a C program that declares an integer variable, assigns it a value, and then uses a pointer to modify its value. Print the original and modified values.
2. **Pointer Arithmetic:**
   * Create a C program that initializes an array of integers. Use pointer arithmetic to traverse the array and print each element's value and address.