

CS 161 Recitation

Worksheet: Week 7

1. What is the difference between pass by value, pass by reference, and pass by pointer?
Show an example of the syntax you would use for each case.

2. Write the code to declare a variable (of type: `double`) named `total`. Initialize `total` to the value: `23.5`. Next, write the code to initialize a reference named `r_total` that is an alias of `total`. Lastly, declare and initialize a pointer named `p_total` that points to the variable `total`.
 - a. Using `r_total`, set the value of `total` to `45.7`
 - b. Using `p_total`, change the value of `total` to `923.3`

3. What is the difference between the heap and the stack?

4. How is static and dynamic memory different? Can you give an example of when each type might be useful?

5. How are pointers useful when working with dynamic memory?

6. What is an array? How do you access elements in an array?