

CSC 10A

Accelerated Introduction to Programming Logic

Homework #2

50 Points

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Using Looping with Arrays

The purpose of this assignment is to expose you to algorithms that can be solved using looping with arrays. This is a useful logical skill to develop in Computer Science and programming. Solve the problems below for credit:

Problems

Write pseudo-code to solve the problems below:

Problem #1 (10 points): Write pseudocode that will solve the exponent problem

Assume you are given an integer variable “base” which is the base value of the exponent. Assume you are given another variable “power” which is what power the base is raised to.

Use a looping method of your choice (*for* or *while*) to solve this problem and save the results into a variable. Display the variable as well.

This problem doesn’t require an array, but it gets your feet wet for solving this sort of problem before you move into arrays for the final two problems.

```
int sum = 0
```

```
“base” = 0
```

```
“power” = 0
```

```
for (int i = 0 to “power” STEP +1){
```

```
    sum = “base” * “base”
```

```
PRINT sum
```

```
}
```

Problem #2 (20 points): Write pseudocode that will solve the sum problem

Assume you are given an integer array “a” which contains n values. Using looping, find the sum of all elements of the array “a” and save them into a variable.

Display the variable. You may use either *for* or *while* looping to solve this problem.

```
int sum = 0
for (int i = 0 to a.len STEP +1){
sum = a[n] + a[n+1]
}
```

Problem #3 (20 points): Write pseudocode that will solve the max value problem

Assume you are given an integer array “a” which contains n values. Using looping, find the largest value inside of the array data set.

Save this value into a variable and display it. You may use either *for* or *while* looping statements.

```
int x = 0
string “max”
for (int i = 0 to a.len STEP +1){
max = a.max
x = a.peek (“max”)
}
```

Submission

Submit this assignment on Canvas by the due date for credit. Use .doc, .pdf, or .txt format for code.

If you have any questions, let me know.

