

ECED 3204 Microprocessor

Assignment #4

<http://www.jasongu.org/3204/assignments.html>

Due date: October 18, 2017. Late submission will not be accepted.

Assignment #4 contains the following problems:

E6.1 What is the value of ax/bx , assuming that $ax=93$, $bx=19$?

E6.6 Write a program to find the median of an array of 8 bit unsigned integers. When the array has an even number of elements, the median is defined as the average of the middle two elements. Otherwise, it is defined as the middle element of the array. You need to sort the array in order to find the median.

E6.11 Write a switch statement that will examine the value of an integer variable yy and assign one of the following values to the variable dd , depending on the value of yy :

- a) 15, if $yy==1$
- b) 25, if $yy==2$
- c) 35, if $yy==3$
- d) 45, if $yy==4$
- e) 55, if $yy==5$

E6.16 Write a function to determine whether a three-digit number is an Armstrong number and a main program to find all the 3-digit (> 100) Armstrong numbers and store them in an array. (An Armstrong number is a number that is equal to the sum of each digit raised to the n th power. For example, 153 equals $1^3+5^3+3^3$)

E6.21 Write a function that can convert a binary number into a NULL-terminated BCD string that represents the given binary number.