Lab 03

BINBCD

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Category	—	zachdav@uga.edu
In-lab Work	50	50
Lab Report Writing	50	50

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Question 5-7

Convert the 16-bit number in $D500-$D501 and each of the eight bit numbers in $DB00-$DB04 to decimal and enter the information in the table below. Repeat with a number between 00FF-0FFF. FInally, repeat this with a number between 0FFF-FFFF.

$D500-$D501 in Binary	$D500-$D501 in Hex	$DB00	$DB01	$DB02	$DB03	$DB04
187	BB	0	0	1	8	7
4090	FFA	0	4	0	9	0
56797	DDDD	5	6	7	9	7

Question 8

Choose a number between 10,000 and 65,535 to be stored in $D500 and $D501. "Execute" the program by hand and write down the impact of each instruction on the registers and memory locations involved in it.

Depending on the decimal or hexadecimal value you choose will effect when exactly in the program the value of certain flags will be 1 or 0. What we definitely know is that every program will effect the Zero, Carry, and Overflow CPU registers.

Question 9

What do you think the program is doing?

This program is taking the value stored in $D500 and converting it as the higher byte to decimal and taking the value stored in $D501 as the lower byte to decimal. In other words with $D500 being the lower byte and $D501 being the lower byte the value stored in them is converted from hexidecimal to decimal.

Question 10

What do you think that XGDX is doing?

This instruction swaps the value in accumulator D with the value in the X register. This is a more effective and efficient way to do this conversion than constantly pushing and pulling from a stack.