**Arm assembly report Mezemir Gebre**

**Part1**

The screenshot below is what I got after writing, assembling, debugging and analyzing the memory for the “second.s” program that has been given in the document (Arm\_Assembly\_programming\_A2 in icollege). As you can see, I put break on line 15 (address 0x10088) and analyzed the values in that address then it displayed those three hexadecimal values stored in that address.

**A screenshot of a cell phone

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**Part2**

The problem given here was to do the following arithmetic(val2+9+val3-val1) and store the result in the register. To do that, First I had to declare val1, val2 and val3 in the .data section as 32-bit integer variables and assigned their given value as you can see in the picture below. Since I was asked to verify the result in the memory and register, the next thing I did was to load the memory address of those variables into the registers, also their assigned value as well. The last thing I did was the arithmetic, added 9 to val2 and store it to r2 then I added 16 to r2 and store it in r2 again and subtract val1 from value 2 then add val1 to val2 and finally stored the result in r2 as you can see in the second picture, I got 30 in r2 register, which is the correct result for the given problem. The third picture is what I got after analyzing the memory for this program.

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