

EE 315 Lab Assignment for Week 9

Important Note: The problem below is to be solved individually by each student.

- You will write a code that will POP two numbers (0xBBAF5C91 and 0x14C6E3AF) **that you previously written** from Stack (**You should not PUSH these numbers into the stack. Use manual memory manipulation techniques that we performed**) into the R1 and R0 registers. (R1=0x BBAF5C91), (R0=0x14C6E3AF).

**NOTE: DO THIS POP OPERATION IN A SINGLE LINE
THERE SHOULD BE NO INSTRUCTIONS BEFORE THIS POP OPERATION**

- You will subtract these numbers (0x BBAF5C91-0x14C6E3AF) (the result will be 0x A6E878E2) and put the result into the R2 register. (R2=0x A6E878E2)
- Then update the Stack Pointer (**not by manual register manipulation, just write the necessary codes in order to update the Stack Pointer**) in order to prepare Stack Pointer to write this result between 0x20000408 and 0x2000040B memory address regions.
- Then you will use “PUSH {R2}” instruction in order to write this result to that desired memory region.

HINTS:

- Initial Stack Pointer shows the address region 0x20000400. So, consider to write these first two numbers accordingly.
- Please consider and take care of Big Endian and Little Endian issues!
- Before writing your code, you may test your manual memory manipulation technique using PUSH operation before the POP operation and see the result.