HW3

Q1

In the solutions, five registers are saved.

Pay attention to the following:

* Loop
* Calculate the address of an array element
* Function call
* Use the return value
* Save/restore registers. This part is written after other instructions are done.

Q2

In the solutions, four registers are saved. It is possible to save/restore only three registers.

This question allows us to practice a) calculate the address of an array element, and b) call functions.

We write the code that saves/restores registers after other part of the function.

The lab git repo has skeleton code for a full merge sort function. You can test your code after implementing the merging step.

Q3

I10. Machine code in hex: 17455463

I11. Machine code in hex: FC050CE3

I11. Machine code in hex: F61FF06F

You can also check the answers in RARS.

Q4

We calculate the target address in hexadecimal.

0x0400366C: 0xDB5A04E3

imm in decimal: -600. The target address is 0x04003414.

0x04208888: 0xFA9FF0EF

imm in decimal: -88. The target address is 0x04208830.