# MIPS Program : Recursion

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For this assignment you will write a MIPS assembly program that is a translation of the C++ code that accompanies this assignment in Blackboard. **If you do not understand any of the C++ instructions in the file, ASK me about them!**.

- Notice that the several functions are recursive and thus your corresponding functions must be recursive as well.
- Normal rules about naming, style, register legends apply!
- You **must** follow conventions for all register types!
- You may only use *s*, *a*, and *v* registers in this program!
- You **must** follow conventions for all parameters and return values.
- You will lose points for unnecessary instructions (jumps, branches, invalid pseudo-instructions).
- Use expected practice/convention for when items are saved to the save and for what part of the code is responsible for saving items to the stack.
- Stack space for a procedure must be allocated/reclaimed with one instruction.
- When entering a procedure, the callee does not need to move the contents of *a* registers to *s* registers unless convention or accepted practices dictates otherwise. (The last assignment required you to move the contents from *a* registers to *s* registers when entering a procedure. This assignment does not require this - unless doing so is the expected/conventional/accepted manner of performing a task.)

## Teams

1. You must work in teams of two unless directed otherwise by the instructor. Teams will receive the same grade unless it becomes evident to the instructor that one person completed all (or most) of the program. Teams may talk to other teams about the general concepts. However, sharing code with other teams is strictly prohibited.
2. You may choose your own partner but **one** person from the team must email the instructor listing who is one your team by 5:00pm on Monday, October 31. If you do not form a team by that time, the instructor reserves the right to assign teams of one or two. If you are assigned to a team of one, note that the programs in this class are designed such that a single person can complete them.
3. Your name(s) **must** be included in the file.
4. Each team will turn in **one** copy of the assignment.
5. Each team member must submit a CONFIDENTIAL evaluation of their partner. The instructor reserves the right to assign grades based on contribution and/or other factors, including an oral demonstration of project code.

## Submit

Submit the following items to Canvas by Friday Nov. $11^{th}$ at 11:59 pm.

- recurse.asm (your file **must** be named recurse.asm). Only one team member should submit an .asm file.
- A team evaluation. Both team members must turn in an evaluation.