

A. Identify which local values get stored in callee-saved registers.

From line 9 to line 14, we can see that the local values a0-a5 are stored into callee-saved registers %rbx, %r15, %r14, %r13, %r12 and %rbp, respectively.

B. Identify which local values get stored on the stack.

Local values a6 and a7 are stored on the stack at offset 0 and 8 relative to the stack pointer.

C. Explain why the program could not store all of the local values in callee-saved registers.

After storing six local variables, the program has used up the supply of callee-saved registers. It stores the two local values on the stack.