

### **Call code (THE CALLER):**

- a). Saving the volatile resources (EAX, ECX, EDX, EFLAGS)
- b). Passing parameters
- c). Saving the returning address and performing the call

### **Entry code (THE CALLEE – called subroutine):**

- a). Building the new stackframe      PUSH EBP,  
   MOV EBP, ESP
- b). Allocating space for local variables      SUB ESP, nr\_bytes
- c). Saving non-volatile resources exposed to be modified

### **Exit code (THE CALLEE):**

- a). Restoring non-volatile resources
- b). Freeing the space allocated for local variables [ADD ESP, nr\_bytes\_locals] – mentioned here just as a reverse for the above b) from the entry code, but not really necessary because deallocating the stackframe (mov esp, ebp) includes this action anyway from a practically point of view.
- c). Deallocating the stackframe      MOV ESP, EBP (if we know exactly the size of the stackframe , ADD ESP, sizeof(stackframe) solves similarly...)  
    and restoring the base of the      POP EBP  
    caller stackframe (old EBP)      (a, b c – the reverse of the entry code)
- d). Returning from the subroutine (RET) and deallocating passed parameters (if we have a STDCALL function)      -      (reverse of b + c from the call code)

It is still to be done the reverse of a) from call code. It is the task of the CALLER to do it together with a possible parameters take out from the stack (if it is a CDECL function).