Michael Gil

**Assignment 9**

1. The stack frame is also known as the activation record. It is the collection of all the data on the stack associated with one subprogram call. It usually consists of the return address, argument variables passed on the stack, local variables, and saved copies of registers modified by the subprogram that need to be restored.

2. A calling convention is a low level method for the way in which subroutines receive parameters from the caller and how a result is returned. Calling conventions describe the interface of called code.

3. push ebp and mov ebp, esp are known together as prolog assembly function. it stores the previous base pointer (ebp) and sets the base pointer as it was the top of the stack. All the stack contents are saved down the stack, so the function can push and pop in the stack.

4. in 64 bit you use push rbp instead of push ebp. You use mov rbp, rsp instead of mov ebp, esp.

5. Unlike the microsoft calling convention, a shadow space is not provided in System V AMD64 ABI. Upon function entry, the return address is adjacent to the seventh integer argument on the stack.

6. a is in rcx, b is in rdx, c is in R8, d is in R9, e and f passed on stack.

7. Registers EAX, ECX, and EDX are designated for use within the function. Return values are stored in the EAX register. Stack cleanup by calle.