Problem 4:

A change is needed as, when we link the same 32-bit file used in part a) we get the error that instructions push and pop cannot be used in 64-bit mode.

To overcome this problem , I have leveraged the simple concept of 64-bit assembly, that when we input values from C and link it to an aseembly function then the input values can be accessed using the registers rdi,rsi,rcx,rdx,r8,r9.

Thus i haved the four registers rdi,rsi,rcx and rdx to get the four values input by the user in the C program.

When you call a function in x64, the manner and use of the registers follows a very specific convention. This dictates where the parameters to the function should go and where the return value from the function will be when the function finishes. This is important so code compiled with one compiler can be used with code compiled with another compiler.1