EPICODE

CYBERSECURITY COURSE

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PRACTICE EXERCISE S10/L3

Track:

In the morning theory lesson, we looked at the fundamentals of the Assembly language. Given the code in Assembly for the x86 CPU attached below, identify the purpose of each instruction by entering a description for each line of code.

Remember that numbers in the format 0xYY are hexadecimal numbers.

To convert them to decimal numbers go ahead and use an online converter, or your computer's calculator (for programmers).

0x00001141 <+8>: mov EAX,0x20

0x00001148 <+15>: mov EDX,0x38

0x00001155 <+28>: add EAX,EDX

0x00001157 <+30>: mov EBP, EAX

0x0000115a <+33>: cmp EBP,0xa

0x0000115e <+37>: jge 0x1176 <main+61>

0x0000116a <+49>: mov eax,0x0

0x0000116f <+54>: call 0x1030 <printf@plt>

INSTRUCTIONS:	DESCRIPTIONS:
0x00001141 <+8>: mov EAX,0x20	Moves the integer decimal value 32 to the EAX register.
0x00001148 <+15>: mov EDX,0x38	Moves the integer decimal value 56 to the EDX register.
0x00001155 <+28>: add EAX,EDX	Sum the EDX register to EAX, basically sum 56 to 32 and update the EAX register with the sum = 88
0x00001157 <+30>: mov EBP, EAX	Moves the contents of the EAX register, i.e., 88 in the EBP register
0x0000115a <+33>: cmp EBP,0xa	Check (CMP= appear) the equality between the value 0xa which in decimal is the number 10 with the value contained in EBP i.e. 88
0x0000115e <+37>: jge 0x1176 <main+61>	Performs a conditional jump if the destination of "cmp" is greater than or equal to the control value. Given that 88 > 10, the jump is performed
0x0000116a <+49>: mov eax,0x0	Overwrites the value of EAX with the value 0, i.e., moves 0 to EAX
0x0000116f <+54>: call 0x1030 <printf@plt>	Function call to a function known to us, is the printf function