Name: Orchlon Chinbat

CWU ID: XXXXXXXX

Honor Code: I pledge that this submission is solely my work, and that I have neither given, nor received help from anyone.

Question 1:

1. The selected number is 76. The specified range is [2^5, (2^7 − 1)], which translates to [32, 127].
2. The selected number is 20.123. The specified range is [2^4, 2^6], which translates to [16, 64].
3. Hexadecimal of 94962 is 0x172F2.
    - Repeatedly divide by 16 and keep the remainder.

Division	Remainder	Hex (0x)
94962 / 16 = 5925	2	2
5925 / 16 = 370	15	F2
370 / 16 = 23	2	2F2
23 / 16 = 1	7	72F2
1 / 16 = 0	1	172F2

The final answer is **0x172F2**.

Here is the memory translation. The byte-reversed values can be found in the third row of **memory.lst**. You can rearrange the reserved numbers to obtain the hexadecimal values.

- For **db 4C**, it remains unchanged.
- For **dw 004C**, it becomes **4C** | **00**.
- For **dd 4C000000**, it becomes **00 | 00 | 00 | 4C**.
- For **dd E7FBA041**, it becomes **41| A0| FB | E7**.
- For **dd F2720100**, which becomes **00 | 01 | 72 | F2**.

Here is the table.

Label	Size (bytes)	Decimal	Hex (0x)	Byte Reserved
a	db = 1	76	4C	4C
b	dw = 2	76	004C	4C00
c	dd = 4	76	0000004C	4C000000
d	dd = 4	20.123	41A0FBE7	E7FBA041
e	dd = 4	-	000172F2	F2720100

Question 2:

1. Used **resw** to allocate 20 words, as "w" signifies "word."
2. Used **resb** to allocate a specified number of bytes, as "b" stands for "byte."
3. Used **resd** to reserve a specified number of double words, since "d" represents "double word."