- 1. I am using mac OS terminal and it does show up!
- 2.  $2^7 = 128$  possible
- 3. 0x53 0x4C 0x55 0x00
- 4. 3 bytes
- 5. No only English. Greek.
- 6. A logographic language is a writing system in which each symbol represents a word or a morpheme (a unit of meaning) rather than a sound or a syllable. Examples of logographic languages include Chinese, Mayan, and Egyptian Hieroglyphics. A 7-bit character set, such as ASCII, does not work for logographic languages because it is limited to 128 unique symbols. This is not enough to represent all the characters needed for a logographic language like Chinese. In comparison, the modern standard for representing Chinese characters, GB18030, uses a minimum of 4 bytes (32 bits) per character, providing enough space to encode over 40,000 characters.

人物 = character

7. Yes

8.

```
a. UTF - 8 = 53
```

c. 
$$UTF - 32 = 00\ 00\ 00\ 53$$

- 9. 20
- 10. Done
- 11. Copying data means creating a new and separate memory location for the data, which can consume a lot of memory, especially when working with gigabytes of data. On the other hand, creating a new view of existing data just provides a different way of accessing the same data without creating a new memory location, which is more efficient in terms of memory usage.
- 12. Done
- 13. Done
- 14. They are not equal. In one you are counting the bytes and in the other you are counting the number of characters. They will be equal when number of characters = number of bytes.
- 15. ok