Python programming HW – 1

1.

My current computer is a custom built desktop running as 3.5 GHz Intel Core i5 processor. It currently has 8gb of ram and 3gb of video ram.

The disk space is 1 TB disk drive and 250 GB solid state drive.

2.

My current phone is a Samsung galaxy S5 with a Quad-core 2.5 GHz Krait 400 and 2 gb of ram. It has 16 gb of internal memory. It is running Android.

3.

A von Neumann Bottleneck is the idea that throughput in the system is limited by the ability of processors relative to the ability to transfer data.

4.

In a 4 bit architecture 16 bytes of memory can be addressed.

5.

In a 8 bit architecture 256 bytes of memory can be addressed.

6.

In a 16 bit architecture 65536 bytes of memory can be addressed.

7.

In a 32 bit architecture 4294967296 bytes of memory can be addressed.

8.

In a 64 bit architecture 1.84467×10^{19} bytes of memory can be addressed.

9.

a. 2468

b. 4023

c. 1776

10.

a. 10 + 5 = 15

b. 10 + 7 = 17

c. 7 + 1 = 8

11.

Base 8 can be used to effectively represent 3 bits of data at a time

12.

Base 16 can be used to effectively represent 4 bits of data at a time