Anuj Modi

CA Boot Camp 2020 Assignment 01

Question 01: What is Cache Memory?

Cache memory is a byte sized memory (typically 5 MB in old computers to 64 MB {60-70 in most modern computers} because in general, the smaller it is, the faster it runs {dont make it too small, because it loads basic data and outputs the result} for I/O operations) used for temporary storage of repetitive data and its efficiently fast retrieval.

Question 02: What is Disk Management?

A disk is a magnetic strip capable of storing information by crests and troughs (which indicate 0 and 1 respectively) which can be read via a pin which reads the crests and troughs. Disk Management refers to partitioning of this magnetic strip to create separate markers/indicators for the disk which separate data on each of these. This can be used so that even if we corrupt one part of the disk, due to the markers being present, the entire disk is not corrupted. It is important to note that these markers can be moved meaning the disk size can be changed at will and newer disks can be created as well.

Question 03: Cache vs RAM:

Cache is a form of temporary internal storage similar to RAM but very small in size and around 10-100 times faster. Cache is generally for repetitive register data, which we do not want the registers to recalculate (a typical register size is 64 KB, which makes it very hard to process a few MB’s worth of data on registers multiple times). RAM on the other hand is slower temporary storage, but is capable of storing larger amounts of data.

Question 04: HDD vs SSD:

HDD is hard disk drive. As explained above, it is a form of a magnetic disk, which reads data from crests and troughs in the magnetic strip (keep in mind these crests and troughs are magnetic orientation… not actual ups and downs). SSD on the other hand is a NAND flash memory, which unlike the HDD has no moving parts (used for reading operations in HDD), which is something similar to individual cells of NAND memory which makes it more similar to a RAM but a permanent version of data storage.