

Assignment No. 1

CS101 (fall 2011)

Assignment No. 01
Semester Fall 2011
Introduction to Computing-CS101
Total Marks: 15
Due Date: 31-10-2011

Q.1. There are multiple ways to enhance the performance of a computer system. Discuss what role a cache can play in boosting up the performance of a computer system? (5 Marks)

same terms. Do you agree? Justify your opinion with a real life example. (5 Marks)

Q.3. Convert the following Octal Number to Hexadecimal Number by writing each and every step of conversion process: (5 Marks)

$(53324)_8 = > (?)_{16}$

Solution:

Q.1. There are multiple ways to enhance the performance of a computer system. Discuss what role a cache can play in boosting up the performance of a computer system? (5 Marks)

Answer:

A CPU cache is a cache used by the central processing unit of a computer to reduce the average time to access memory it is different as compare to the main memory which is used to copy data from the secondary storage it store the data inside the page file and then take it from there as compare to cache memory it exists inside the cpu and directly gives the data to cpu to process the instructions lets see a figure which will make it more clear. The cache is a smaller, faster memory which stores copies of the data from the most frequently used main memory locations. As long as most memory accesses are cached memory locations, the average latency of memory accesses will be closer to the cache latency than to the latency of main memory. It is Volatile memory, also known as volatile storage, (vrshc) is computer memory that requires power to maintain the stored information, When

the processor needs to read from or write to a location in main memory, it first checks whether a copy of that data is in the cache. If so, the processor immediately reads from or writes to the cache, which is much faster than reading from or writing to main memory. Most modern desktop and server CPUs have at least three independent

caches: an instruction cache to speed up executable instruction fetch, a data cache to speed up data fetch and store, and a translation [virtual solutions] lookaside buffer (TLB) used to speed up virtual-to-physical address translation for both executable instructions and data. Data cache is usually organized as a hierarchy of more cache levels which are L1 and L2 etc.

are same terms. Do you agree? Justify your opinion with a real life example. (5 Marks)

Answer:

AS we know nowadays these are very common terms which we use in our daily life so for that you called mostly the Ram as the memory of the system and the Storage device which is called the hard disk or

difference between them lets see it in real life that in Memory which is Volatile (vrshc) and need powers to maintain if the electricity is off then it is going to wash each and everything. As compare to the Storage Non-

time when the data is store to it and power went off next time you can see the data inside it. As we can see a new functions which start from the Xp Windows Os from Microsoft. Hibernate it store the data to the hard drive from the Memory You can say the Memory to storage when you hibernate the system it will open next time all the files and

Q3).Convert the following Octal Number to Hexadecimal Number by writing each and every step of conversion process: (5 Marks) $(53324)_8 \Rightarrow (?)_{16}$

First we will convert this to binary to decimal