

CSE310 Lecture02:

The Computing Model and Asymptotic Notations

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Topics of this lecture

- The RAM
 - constant access of memory
 - constant time for basic operations
- Counting and Four Important Summations
- Big Oh, Big Omega, Theta Notations
 - definitions
 - examples
 - properties

RAM: Random Access Machine

- RAM stands for Random Access Machine, which is a very useful model of computation.
 - basic instruction can be performed in one unit of time.
 - running time is equivalent to the number of operations required.
- We will study function $f(n)$ that is asymptotically positive, i.e., $f(n) > 0$ for n large enough.