1 Lecture 1

2 Lecture 2

1. Big O: upper bound. Let $T(n), g(n)$ be functions of positive integers. Formally, $T(n) = O(g(n))$ iff $\exists c, n_0 > 0$ such that $\forall n \geq n_0$, $0 \leq T(n) \leq c \cdot g(n)$.
2. $\Omega(\dots)$ means a lower bound. We say $T(n)$ is $\Omega(g(n))$ if $T(n)$ grows at least as fast as $g(n)$ as $n \to \infty$. Formally, $T(n) = \Omega(g(n))$ iff $\exists c, n_0 > 0$ such that $\forall n \geq n_0$, we have $0 \leq c \cdot g(n) \leq T(n)$.
3. We say $T(n) = \Theta(g(n))$ if both of the above are true.