13.9 Summary

To summarize this chapter:

- Given a piece of code, we can express its runtime as a function $R(N)$
  - N is a **property** of the input of the function often representing the **size** of the input
- Rather than finding the exact value of $R(N)$, we only worry about finding the **order of growth** of $R(N)$.
- One approach (not universal):
  - Choose a representative operation
  - Let $C(N)$ be the count of how many times that operation occurs as a function of N.
  - Determine order of growth $f(N)$ for $C(N)$, i.e. $C(N) \in \Theta(f(N))$
  - Often (but not always) we consider the worst case count.
  - If operation takes constant time, then $R(N) \in \Theta(f(N))$.

Previous
13.8 Big-O

Next
13.10 Exercises

Last updated 1 year ago