

QuickSort

- What is the runtime of QuickSort when the pivot is always chosen to be the median element of the array? (Use a recurrence relation)
- What is the runtime of QuickSort when the pivot is always chosen to be the smallest element of the array?

Probability Review

Suppose you have Q processors and J jobs. If you assign each job to a processor uniformly at random, what is the expected number of jobs processor 1 will get?

1. What is the sample space?
2. What is the random variable of interest?
3. How can you divide up the random variable into indicator random variables?
4. Calculate the expectation of your random variable using indicator random variables.