

Analysis and Design of Algorithms



Algorithms
CS3230
CR3330

Tutorial

Week 5

Question 5



- Given a sorted array of n real numbers $A[1..n]$ and a query number x . You need to develop a function $\text{search}(x, A)$ which returns an integer i if $A[i]=x$; and returns -1 otherwise.
- We have two assumptions:
 - Assume comparison model
 - Assume each comparison returns $<$, $=$, or $>$.
- What is the lower bound of the number of comparisons (exact bound instead of asymptotic bound)?



Question 6



- Given an unsorted array of n real numbers $A[1..n]$ and a query number x . You need to develop a function $\text{search}(x, A)$ which returns an integer i if $A[i]=x$; and returns -1 otherwise.
- We have two assumptions:
 - Assume comparison model
 - Assume each comparison returns $<$, $=$, or $>$.
- What is the lower bound of the number of comparisons (exact bound instead of asymptotic bound)?

