Module 14: Overview

Overview

Given an unsorted array of n elements, we can find the minimum element in O(n) time. For an arbitrary integer k between 1 and n, how fast can we find the k-th smallest element?

In this module, we will study an advanced algorithm that can find the k-th smallest element in an unsorted array in O(n) time. We will also study applications of this result.

Learning Objectives

By the end of this module, you will be able to:

1. Study linear time selection algorithm
2. Apply this algorithm to design better algorithms for other problems

Readings

Read the following:

- Section 9.3