

Module 8: Overview



Overview

Disjoint sets is another useful data structure. We model the universe with the first n natural numbers $\{1, 2, \dots, n\}$. We start out with n singleton sets that form a partition of the universe. Each set maintains a representative of the set. Given an integer i , $1 \leq i \leq n$, $\text{Find-Set}(i)$ returns the representative of the set which contain i . When x and y are in two disjoint sets, $\text{Union}(x, y)$ replaces the two sets with its union.

Learning Objectives

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

1. Study the disjoint set data structure
2. Know the time complexities of the operations

Readings

Read the following:

- Section 19.1
- Section 19.2
- Section 19.3