Module 13: Overview

Overview

In this module, we will study a very simple yet useful dynamic data structure known as hash tables. A hash table supports search, insertion, and deletion. While its worst-case performance is not very good, hash tables are usually very fast in practice. We will study two methods to deal with collisions: chaining and open addressing. We will study the hash table operations under both methods. We will also look into simple methods for designing hash functions. In particular, we will study the division method and the multiplication method.

Learning Objectives

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

1. Study hash table data structure
2. Compare the performance of hash tables with arrays, binary search trees, and red black trees

Readings

Read the following:

- Section 11.1
- Section 11.2
- Section 11.3
- Section 11.4