**Product Requirements Document**

“Balanced binary search tree”

Version 1.1

Last modified: 10 November 2021

Number of pages: 3

Table of Contents

1. Introduction
   1. Document Identifier
   2. Scope
   3. Definitions of terms and acronyms
   4. References
   5. Overview

.

1. **Introduction**
   1. **Document Identifier**

The following document is a project requirement document (pdr) for a project on balancing binary search trees.

* 1. **Scope**
  2. **Definitions of terms and acronyms**
  3. **References**

Srivastava, A. K. (2019). *A Practical Approach to Data Structure and Algorithm with Programming*

*in C* (pp 337-392). EBSCO Publishing.

* 1. **Overview**

The project involves balancing binary search trees using sorting methods. In computer science, a binary search tree is a data structure that consists of nodes that have keys and values and are connected in two subtrees. The left subtree consists of nodes with lesser keys, while the right subtree consists of nodes with greater keys. Moreover, each parent node, located above, has a greater key than the child node below.

The main goal of a self-balancing binary search tree is to automatically minimize its height (which is the number of levels in the search tree) upon insertions and deletions. This way, the structure can self-balance and avoid reaching heights that are larger than they need to be.

Hence, the required features of the project is to create a self-balancing binary search tree that can deal with insertions and deletions while maintaining minimal time complexity.