*Java3 AT2 Q2*

Product Design Specification

Version *1.0*

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VERSION HISTORY

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# Introduction

## Purpose of The Product Design Specification Document

The Product Design Specification document documents and tracks the necessary information required to effectively define architecture and system design in order to give the development team guidance on architecture of the system to be developed. The Product Design Specification document is created during the Planning Phase of the project. Its intended audience is the project manager, project team, and development team. Some portions of this document such as the user interface (UI) may on occasion be shared with the client/user, and other stakeholder whose input/approval into the UI is needed.

# General Overview and Design Guidelines/Approach

This section describes the principles and strategies to be used as guidelines when designing and implementing the system.

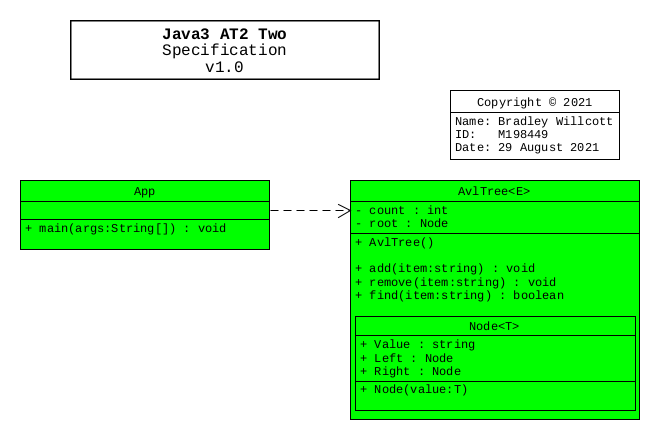
## Assumptions / Constraints / Standards

The program will be able to store a list of mechanical parts.

# Architecture Design

This section outlines the system and hardware architecture design of the system that is being built.

## Logical View



## Hardware Architecture

The design only needs to allow for the program to be run on any Microsoft Windows 10 compatible desktop or portable hardware, be it Intel or AMD processor based.

## Software Architecture

The language to be used, need only be compatible with the Microsoft Windows 10 operating system.

Further, a source control system will be implemented to allow for version control of the project files. It is recommended that the GitHub site, which uses the git version control system and software, be used to provide this facility. It will be necessary that each team member obtain his/her own GitHub membership.

# System Design

## Use-Cases

The project task is to develop a program to store a list of mechanical parts. The list will be sorted alphabetically, and it is to be stored in a balanced binary search tree. This tree is to be developed for a dictionary of no less than 10 words. It must be possible to search the list, add and remove from the list.

## User Interface Design

A Console application is to be provided that shows how to add, search and remove names from the list.

## Coding Compliance

The following standards must be adhered to for software coding:

<https://docs.microsoft.com/en-us/dotnet/csharp/fundamentals/coding-style/coding-conventions>