

Product Specification Design Documentation

Assessment 3 - Project



VERSION HISTORY

This provides information about the changes that have occurred in your files. Specifically, version history provides information like the number of each version, as well as who approved each version and when, who implemented each version and a reason.

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| **Version #** | **Implemented**  **By** | **Revision**  **Date** | **Approved**  **By** | **Approval**  **Date** | **Reason** |
| 1.1 | Daniel Hee |  |  |  |  |
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TABLE OF CONTENTS

[1 Introduction 3](#_Toc24408785)

[1.1 Purpose of The Product Design Specification Document 3](#_Toc24408786)

[2 General Overview and Design Guidelines/Approach 3](#_Toc24408787)

[2.1 Assumptions / Constraints 3](#_Toc24408788)

[3 Project design 3](#_Toc24408789)

[3.1 Data structure 3](#_Toc24408790)

[3.2 Sorting feature 4](#_Toc24408791)

[3.3 Searching feature 4](#_Toc24408792)

[3.4 third parties libraries 4](#_Toc24408793)

[4 development guidelines 4](#_Toc24408794)

[4.1 source control 4](#_Toc24408795)

[4.2 Coding standards 4](#_Toc24408796)

[4.3 software testing 4](#_Toc24408797)

[4.4 Hardware requirement 5](#_Toc24408798)

[4.5 User Interface Design 5](#_Toc24408799)

[5 Product Design Specification Approval 6](#_Toc24408800)

[Appendix A: References 7](#_Toc24408801)

[Appendix B: Key Terms 8](#_Toc24408802)

# Introduction

## Purpose of The Product Design Specification Document

The Product Design Specification document (PDS) is usually created during the early phase of the design process. This document provides requirements that must be met in order to develop a working end-product.

# 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

Assumptions is an important role when developing a risk management plan.

The following are the assumptions for our project’s design:

* Design will be completed and evaluated in one weeks’ time
* Implementing the design should be completed within 3 weeks’ time
* All resources for this project will be provided by you yourself
* Client and Stakeholders will be coming to the next meeting to further discuss about this project

Constraints will consist information such as the cost, timeframe or resources for our project.

The following are the constraints for our project’s design:

* Timeframe to complete the whole project: 4 Weeks
* Cost needed to complete the whole project: $5000
* Resource needed for our project: Laptop or Desktop, internet connection, related software to develop an application.

# Project design

This section outlines what data structures, technique or algorithms that you implemented in your project.

## Data structure

In this project, I would be implementing this following data structure:

* Using LinkedList, this is used to store element in the non-contiguous location.
* Using Hashing, this is a collection of value pairs that are arranged based on the hash code of the key.

## Sorting feature

In this project, I would be implementing a sorting algorithm which are called shell sort method. I would choose this method as my sorting algorithm because this algorithm can sort faster than bubble sort and it is much more efficient when it is for a medium-size lists

## Searching feature

In this project, I would be implementing Binary Search technique because it is the fastest search algorithm with the run-time complexity of O (log n).

## third parties libraries

In this project, I would be implementing a third-party library called LumenWorks CsvReader.

The following are the features of this library:

* Fast Parsing
* Able to read a CSV files

# development guidelines

## source control

In this project, I would be using GitHub as my Source Control. This program allows team members to update and share their documentation. Team members will upload updated documentation or report using version history, this helps team members to identify what has been amended and what had improved during development period

## Coding standards

In this project, there are requirements on the coding standards. The following are the coding standards that will be enforce:

* Layout Conventions
* Commenting Conventions
* Try and Catch and using statements in Exception Handling

## software testing

In this project, there are certain criteria that are needed to test throughout the development period. The following are the criteria that will be tested:

* Ensure user can login to their account
* Ensure user can create an account
* Able to sort alphabetically
* Able to Search
* Able to Read from a CSV Files

## Hardware requirement

In this section, we will be focusing on the minimum requirement that a user should have for this application to run smoothly. The following are the minimum requirement required:

* Pentium 200Mhz or greater
* Windows 7/8/10
* 40MB of Available Hard Disc Space
* USB port (3.0) Supported
* HDMI / VGA Supported

## User Interface Design

In this section, we will be looking at the process of making interfaces in software with a focus on looks. The following will be aim of our user interface:

* Create a design that users will find it easy to use
* Error Prevention
* Aesthetic and Minimalist Design

# Approval

The undersigned acknowledge they have reviewed the **<Assessment 3 - Project> Product Design Specification** document and agree with the approach it presents. Any changes to this Requirements Definition will be coordinated with and approved by the undersigned or their designated representatives.

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Appendix A: References

*Product Design Specifications*. (n.d.). Retrieved from Homepages: http://homepages.cae.wisc.edu/~me349/lecture\_notes/product\_design\_spec.pdf

Shah, S. (2012, May 16). *Writing a Product Design Specification* . Retrieved from Jensen Consulting : https://www.jensen-consulting.co.uk/2012/05/16/writing-a-product-design-specification/

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Appendix B: Key Terms

The following table provides definitions for terms relevant to this document.

|  |  |
| --- | --- |
| **Term** | **Definition** |
| [CSV] – Comma Separated Values | It allows data to be saved in tabular format |
| [HDMI]- High-Definition Multimedia Interface | It used to transmit audio and video data using a single cable |
| [VGA] – Video Graphic Array | It is an analog interface between PC and Monitor. |
| [USB] – Universal Serial Bus | It enables communication between devices and a host controller such as Personal Computer (PC). |