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CIS11 Course Project Part 1: Documenting the Project

Fill in the following areas (purple).

Introduction

1.1 Purpose

This document details the functionality and requirements.

The purpose of this program is to show the student's or the teacher of the student's minimum, maximum, and there average within a total of 5 test scores they input

1.2 Intended Audience and Users

The primary audience/user

Students and teachers

1.3 Product Scope

What is the intention of this program?

The intention of this program is to easily help students and teachers calculate their average score with their test. The program also helps them find their minimum and maximum score so they do not have to think, just input the scores and the program does the rest!

1.4 Reference

Source Documents for the Program Requirements and Specification

Reference Project requirements and LC-3 specifications.

A docx file called Course Project Part 1: Planning and Documenting Project FINAL that contains the program project requirements and specification

Companion Application Requirements Documents (If applicable)

What other documents should be reviewed with this document?

No other documentation that should be reviewed for this application

2. Overall Description

2.1 Product Perspective

Primary program objectives

Performs operations to find the user's min, max, and avg of users test scores.

2.2 Product Functions

The overall description of functionality:

Highlight the program functionality: Identify tasks and subtasks of the program in summary.

The application should complete many tasks and also subtasks. Tasks include finding the users min, max, and avg test scores. Subtasks include making sure the user inputs numbers within range of what we are asking for, math operations to find the average.

Technical functionality

A configurable toolkit of functions including:
What are the technical functions of the program? Subroutines and operations.

Ability to determine if users input validation. Ability to perform mathematical operations to determine users avg

2.3 User Classes and Characteristics

Who are involved in this development process? Include business and technical personnel and their tasks

Students

Use catalog and related information to plan course work.
Use the on-line planning worksheet, and pre-registration functions.

2.4 Operating Environment

What type of system will the application be operated on? Operating system? System types? Development platform?

LC3 Source Code Editor for windows, LC3 simulator for windows.

2.5 Design and Implementation Constraints

Note any constraints or limitations to the application.

There are no constraints or limitations to this application

2.6 Assumptions and Dependencies

Note any dependencies

Application does not have any dependencies to function

3. External Interface Requirements

3.1 **User Interfaces**

How will the user interface with your program? Menus? Access prompt? Links? Icons?

If the user is using an LC3 simulator for windows (which the user should be using for the application), the user will be met with a console / simulation asking the user to enter 5 test scores. After the user inputs there scores, the console will display maximum, minimum, average scores and letter grade equivalent (0 – 50 = F, 60 – 69 = D, 70 – 79 = C, 80 – 89 = B, 90 – 100 = A) on the console.

3.2 **Hardware Interfaces**

Specify hardware interface – computer types? Terminal types?

This application does not require a specific hardware interface.

3.3 **Software Interfaces**

Specify additional software interface – if any. What type of software will the application require to run?

Required software to have the application to run: LC3 Source Code Editor for windows, LC3 simulator for windows.

3.4 Communications Interface

Does your application require web, Internet or network connectivity? If so, which browser? What type of network connection?

This application does not require a web, internet or network connectivity.

4. Detailed Description of Functional requirements

4.1 Type of Requirement (summarize from Section 2.2)

What are the functions? Their purposes? Inputs? Outputs? Data? Where is the data stored (internal or external to the application)?

Purpose: The scores the users input will help the user determine what their average is, and the max and min score value.

Inputs: Input would be numbers from the user's keyboard that are the scores of 5 tests

Processing: Depending on the inputted character, the program will determine if said input is within the given range, else the program will halt the program and bring everything to a close. In addition, certain inputs will soon be saved into labels to meet the requirements for proper output.

Outputs: Displays maximum, minimum, average scores and letter grade equivalent (0 – 50 = F, 60 – 69 = D, 70 – 79 = C, 80 – 89 = B, 90 – 100 = A) on the console.

Data: number values of test scores

4.2 Performance requirements

What is the expected performance level of the program?

Since the application will be displaying a simulation/ console for the analysis, the response time for a particular analysis should be near instant with showing users results. Error handling should be implemented and the application should be able to handle all runtime errors.

4.3 Flow Chart and Pseudocode.

Flowchart and Pseudocode are submitted in pdf's with this document.