**Software Development 2023**

**School Assessed Task (SAT)**

**Software Requirements Specification**

*Grading manager software*

**Client:**

SoulBlade172

**Developer:**

45rfew

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**Purpose and audience of SRS**

This Software Requirements Specifications (SRS) aims to establish the expectations of development and presentation of the final product between the client – who is the audience - and developer of the grading manager software. This software is under development for the aim to submit to Unit 3 Outcome 2 and Unit 4 outcome 1 of the VCE software development subject, on behalf of the developer.

As a formal agreement between parties, this document states the specifications of the solution that the developer is required to achieve within this project. This SRS includes criteria that the final product is requested to be able to perform and can be used as a guideline by the developer to reach these requirements.

**User characteristics**

The software is intended for use solely for use by the client. They will be referred to as the ‘user’ throughout this document. The software is designed for a single user and as a result changes can be made depending on their wishes.

The user is a fluent English speaker with no accessibility issues that would hinder their use of the software. As part of their job as a teacher the user interacts with electronic devices on a day-to-day basis, with the most frequent being a laptop. The user is highly technologically proficient, and no computer competency training is needed at this point.

**Environmental characteristics**

The software will be developed within Visual Studio using .net framework with a windows GUI, all inside a Visual Studio enviroment.

The software will run on a non-commercial Thinkpad laptop with the specifications of 8GB RAM and an Intel core i5 processor.

**Functional requirements**

* Log in system as a security system. The user may create an account using a username and password which are backed up within a file.
* The user can create a ‘class’ which they would then add student data to. When creating a ‘class’ they can modify any parameters (e.g., name, age, attendance, test scores etc.) or add their own.
* The user can input and modify student data within a DataGrid.
* Data entered within ‘class’ data grids can be sorted alphabetically or numerically.
* When inputting data under within data grids under ‘Result’ the user may choose from different marking systems; numerical (e.g., 40%, 65% 92% etc.) and categorical (e.g. C A+ B- etc.). These options will only appear if the user sets a column within DataGrid to a ‘result’ type.
* There will be an option allowing the user to save the data within the current data grid as either a CSV file or XML file. The user will then be able to import previously saved files which would create a new class.
* The software will display a singular class at one time, with other classes being displayed as ‘tabs’.

**Non-functional requirements:**

* Usability - The software must be easy and intuitive to use and will not require any external help to pilot.
* Robust - Error message will be shown with relevant information however the program will continue to run.
* Accurate – All calculations and sorting done by the program must be fully accurate.
* Communication – Any text shown will be in English with in the simplest form possible to avoid confusion.
* Attractiveness – The software must be done in a modern design.
* Readability – The fonts and colors used must be easy to read at glance.
* Forgiving of user errors
* Clarity – The software must label or indicate the purpose of everything displayed on the UI.
* Cheap to run – The software must not take up more than 20% CPU usage when run on the client’s device.
* Relevance – Information presented to the user must be related to the task that the user is trying to perform.
* Timeliness – Any request by the user must not take longer than 400ms.

**Constraints:**

Time – the entire project must be completed from May 31st, 2023, to 21st July 2023, with only around 4 weeks for the development of the solution itself. This limits the scope of what the solution is capable of due to the little time allocated for development.

Experience – The experience of the developer is quite limited, with this project being constrained entirely to visual basic.net. This limits the scope of that the solution can do as most functions will have to be less advanced (e.g., encryption system).

Operating system – The software must run on any modern windows or mac device.

Resources – The developer listed on the title page must be the sole person developing the software, with the use of limited external resources. This limits the scope of what the solution can do due to less work being put into development.

**Scope:**

In scope:

The program is intended to achieve all the points listed in functional and non-functional requirements:

* Allow a user to log in
* Allow a user to create an account
* Allow the user to create multiple classes
* Allow the user to modify or delete classes parameters
* Allow the user to add student data to a class which will be displayed as a data grid
* Allow the user to modify or delete student data
* Allow the user to sort student data
* Allow the user to create a special class parameter as ‘result’
* Allow the user to choose the data type of data input allowed from different preset methods
* Allow the user to save and import classes as a CSV or XML file
* Allow the user to switch view between classes
* Allow the user to change the theme of the software

Out of scope:

The program will not be able to achieve anything not listed within the function and non-function requirements. Unless the project is running ahead of time or if something critical has been missed the solution will not be able to:

* Encrypt stored data.
* Have internet functionality.
* Have network functionality.
* Autosave data.
* Display any visual graphs based on data inputted.
* Import databases from excel.

**Appendix**:A diagram of a person

Description automatically generated with medium confidence

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Level one Data Flow Diagram 