Vision and Scope Document

for

Grader Tool

Version 1.1

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2009-01-19

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Revision History

Name	Date	Reason For Changes	Version
Michael Quan	2009-01-15	First Draft	1.0
Michael Quan	2009-01-19	Revised First Draft	1.1
Nat Welch	2009-01-20	Cleaned First Draft	1.2

1. Business Requirements

1.1. Background

Every university needs an intuitive grader tool where teachers can manage assignments per course taught. Students also need to access reports of their class progress. This service should be accessible anywhere in the world through the Internet.

1.2. Business Opportunity

There is a big market opportunity for grading tools. Many educational institutions and instructors use various grading tools with different features. The grading tool will be competing with various collaboration spaces and web based software, which can cost money or contain little features. The proposed grading tool will be a zero cost alternative combining the most functional features from other products using an intuitive graphical user interface. At the same time we will leave opportunity for expansion through user made modules.

1.3. Business Objectives and Success Criteria

The grading tool will simplify grade management for users.
The grading tool will quicken grade viewing for users.
The grading tool will eliminate the cost of having a web based grade management tool.
The grading tool will increase productiveness in time management for grading.
The grading tool will increase clarity in grading breakdowns.
Success will be measured by user feedback and also through the increase in users over a period of time. Success will come from the functionality and features that allow for ease of use without sacrificing detail. The criteria for a successful tool will be positive customer feedback that outnumbers negative customer feedback.

1.4. Customer or Market Needs

Customers will need an easy way to manage and view grades. The customer will also need to look at various metrics of the class. The product will be web based, and thus accessible through a modern web browser. Because of this, the application will be operating system independent. The web server will need to be reliable and running at any given time requested by the customer.

1.5. Business Risks

Development of a custom grading tool carries some risks. The most typical risk when a development is undertaken includes:

Unexpectedly long development times resulting from the addition of requirements or features that are originally not outlined at the beginning of the development. This risk is probably low due to the customers' effort to detail the functions required of the tool.

Critical functions may not operate correctly at first delivery. To ensure that this risk is minimized, these rules should be outlined early in the development process to ensure their correct incorporation into the development plans.

Time constraints of team members will play a big role in the amount of work that gets completed. Team members will need to balance out other classes in addition to working on

the grader tool. Individual team members will also get busy at times through the quarter and may not complete their respective task on time. Time constraints will be handled by rebalancing the given task.

Features may be cut out due to communication issues with customer.

The grading tool may be unused due to the various grading tools that already exist.

2. Vision of the Solution

2.1. Vision Statement

The grading tool will improve both usability and features for educational institutions looking for powerful and cost effective solutions for managing grades.

2.2. Major Features

2.2.1 System and Rules

End Users

    A. Administrators
       Major subcategories of information include:
         a. Teacher
           The teacher will be the major administrator for up to five courses. They will be able to manage students and their respective grades and also create and manage the teacher assistant position.
         b. Teacher assistant
           The teacher assistant will be given permissions by the teacher to perform requested tasks. TAs are upgraded students.
    B. Students
       Students will be able to view their grades and compare them to the class average.

Basic Business Rules

    A. The system must support a minimum cap of 200 students per class. The typical class size is 40 but larger class loads have existed.
    B. A teacher instructs a maximum of five classes. Each class may have a respective Teacher Assistant.
    C. The system instance will be local and does not know of any prerequisites.
    D. If a student has been absent for the entire first week of class, the teacher is notified and has the option to drop the student from the class. If the student is absent for a set percentage of class days, the teacher is notified.
    E. If a student grade is falling below a set level the teacher is notified.

2.2.2 Functional Requirements

    A. There will be two main user interfaces
         a. Administrative
         b. Student

B. There will be a hierarchy of permissions, the teacher being the highest ranked and the student being the lowest.
C. Permissions
    a. Only teachers can create and edit a roster.
    b. Both teachers and assistants can take roll.
    c. Both teachers and assistants can enter grades.
    d. Both teachers and assistants can automatically generate E-Mails to send to individual students or groups regarding grade breakdown or assignments.
    e. Both teachers and assistants can generate and view metrics
        i. Means, medians, and modes based on overall classroom performance.
        ii. For individual students, graphs can be generated for assignment point breakdowns
        iii. Graphs for every type of stored data
    f. A student can only view the metrics, and see his/her individual score breakdown.
    g. Both a teacher an assistant can update or create a news bulletin notifying the entire class of recent grade postings.
    h. Students can easily calculate what score they need on their upcoming assignments/exams for a certain final grade.

2.2.3 Non-Functional Requirements

A. Aesthetically pleasing Graphical User Interface
B. OS independent
C. Backup server for data

2.3. Assumptions and Dependencies

The use of the grading tool assumes instructors will keep track of student's grades. The tool also assumes users have a basic understanding of operating a personal computer.

3. Scope and Limitations

3.1. Scope of Initial Release

The initial release will include all features except those noted for subsequent releases in section 3.2 below

3.2. Scope of Subsequent Releases

The following features will not be delivered in the initial release:
A. Exporting data to a larger scope using tdl, csv and sdl.
B. Modular expansion will be supported, separating between new external modules and a new core.
    a. Excel plugin for fast export
    b. File upload support
    c. Support to connect with several instances into a vast network.

3.3. Limitations and Exclusions

There are no specific limitations and exclusions at this time

4. Business Context

The grading tool will be used by teachers for attendance, grading, and metrics.

4.1. Stakeholder Profiles

4.1.1 Teacher

These individuals will be involved in creating classes and managing students and their grades.

4.1.1.1 Major Benefits

Could reduce time spent in office calculating metrics for multiple students when the grading tool can do it much faster.

4.1.1.2 Likely Attitudes Towards the Product

The teacher may be skeptical because blackboard is already a reliable and widely used tool.

4.1.1.3 Key Product Features of Interests

The metrics feature gives the teacher an incentive to upload grades. It contains warnings for low grades and lack of attendance from students. Accessible from any computer with access to the Internet and a browser.

4.1.2 Student

These individuals will be able to view their grades and see detailed assignment breakdowns.

4.1.2.1 Major Benefits

The student user will be able to view his/her respective grade without directly asking the teacher.

4.1.2.2 Likely Attitudes towards the Product

The student user will embrace whatever the teacher user uses.

4.1.1.3 Key Product Features of Interests

The students will be able to view and calculate their grades. They will also know how they match up against the class average for each assignment.

4.2. Project Priorities

Dimension	Driver (state objective)	Constraint (state limits)	Degree of Freedom (state allowable range)
Schedule	Before end of CPE309		
Features			70-80% of high priority features must be included in release 1.0
Quality			90-95% of user acceptance tests must pass for release 1.0, 95-98% for release 1.1
Staff		maximum team size is 7	
Cost	No Cost	All software used will be freely available or open source	

4.3. Operating Environment

The grading tool will be used on any personal computer in any environment with internet access. The personal computer will need to function properly to open a web browser. Reliable Internet access will ensure the correct functionality of the grading tool. Users will be widely distributed around the world in different countries. All user and database information will be stored on a central server.