GradeCaster
MTM Program Product
Software Requirements Specification

Version 0.1

Applying MTM SRS Version 3.4

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Version History

Version	*Date*	*Authors*	*Comment*
0.1.3	2/24/14	Garrett Brown	Revised Use Cases, Dependancies, Added Product Name
0.1.2	2/15/14	Garrett Brown, Adam Cass, Jon Wareham	Added Use Cases Request Opt-In and Send Grades. Revised Environmental Conditions, Assumptions, Dependencies,
0.1.1	2/11/14	Garrett Brown	Revised Table of Contents, Introduction, General Factors
0.1	2/8/04	Garrett Brown	Added Title Page, Table of Contents, Introduction, General Factors

Readers:
The product described in this SRS, at this point in time, is in no way planned for actual development or release. This SRS is intended for educational purposes, to allow the students of ESOF 328 to better understand the creation of Requirements and Specifications. This document is, however, drafted in such a way that if the software were developed, this SRS would provide the information necessary for any project undertakers.

Montana Tech Software Engineering Students:
These Montana Tech Method software engineering standards encapsulate Dr. Ackerman's decades of experience in the software industry, the IEEE software engineering standards, and many suggestions from various texts. They have gone through many revisions and additions over the last several years. They are part of your software engineering studies so that (1) you may have the experience of developing software to a standard (which you may find you need to do if you take a job that requires high reliability software), and so that (2) you will have the experience of developing high quality software. You are also invited to participate in the continuing evolution of these standards by studying them critically and making suggestions for their improvement and correction.

TABLE CONTENTS

1 Introduction

1.1 Software Purpose and Scope

The goal of the GradeCaster application is to simplify the process of giving students access to grades by creating and sending e-mails to the students in a class with the grades they have received on assignments in a course and their current total grade. This application should make the tracking of grades by students and the posting of grades by instructors easier, as well as improving communications between the two groups.

1.2 Document Purpose and Contents

This Software Requirements Specification (SRS) describes an application that would assist faculty in distributing their course assessment scores to the appropriate students. It was created for the professors of Montana Tech of the University of Montana, who are referred to as the customers in this document. The application is called GradeCaster.

This document is likely to be useful to the customers, developers, testers and, users of GradeCaster. All functionality needed in GradeCaster is precisely described so this document can serve as a contract between the customers and developers. In addition, this document provides information developers will need to design and implement GradeCaster. Testers can use the information to develop test cases for GradeCaster. And users may use the information to clarify questions they have about GradeCaster.

Customers sometimes find sample interfaces easier to understand than documents such as this SRS. Sample user interfaces demonstrate one way that the software could appear. This document goes further to tell precisely what functionality is needed.

This document does not attempt to tell how this software should be implemented except in those cases where the customers want the application to be developed in a particular way. Deciding exactly what a system should do before deciding how it will do it reduces development time considerably.

1.3 Definitions, Acronyms, and Abbreviations

1.3.1 Definitions

Software Failure — A failure will be attributed to this software product whenever one of the delivered work products does not meet the requirements specified in this SRS, or does not meet ordinary and reasonable customer/user expectations.

1.3.2 Acronyms and Abbreviations

DB	Database
DC	Design Constraint
ESOF	Software Engineering

FERPA	Family Educational Rights and Privacy Act
SRS	Software Requirements Specification

1.3.3 Technical Definitions/Data Dictionary

No technical definitions or data items require definition for this system

1.4 References

[Placeholder]

2 General Factors

2.1 Product Perspective

This application will be dependent upon Microsoft Office Excel 2010 and Microsoft Outlook 2010.

2.2 Product Functions

The GradeCaster application will be used to:

- Extract assessment information such as grades from a spreadsheet
- Create e-mails that contain a student's grades in a specific course
- Send e-mails to students
- Support faculty member gaining opt-in requests of students

2.3 Environmental Conditions

GradeCaster will be a Microsoft Excel 2010 macro that performs operations on a spreadsheet, and sends e-mails to students. It will need network access to operate.

2.4 User Characteristic

The primary users of this system are the faculty members of Montana Tech of the University of Montana and their students. The faculty members will use the system to send emails to students, while the students are users in that they receive the messages from the faculty members through the system. As such, the only users who actively use the system are the faculty members, but students are impacted by it. An understanding of FERPA, a familiarity with spreadsheets, file-paths, and executables is assumed.

2.5 Dependencies

GradeCaster will utilize Microsoft Office Excel 2010 and Microsoft Outlook. These programs provide an infrastructure and API that simplifies both the development of GradeCaster, and allows the software to be located inside the application with which faculty create their grade spreadsheets. They are also supported by Montana Tech. Deviation from these software programs by faculty members could result in violation of

FERPA.

2.6 Assumptions

This application will be available on any computer on which it has been properly installed. The hardware will need to be connected to the Internet. The size of the monitor for this hardware is of no importance, as the user interfaces will not benefit from scaling to larger displays.

3 Analysis Use Cases

The following section serves to generally capture, and analyze client and user information about GradeCaster.

Use Case List

Primary Actor	***Use Cases***
Faculty Member	• Send Grades • Request Opt-In
Student	⅄ No Use Cases

Use Case Name:	Send Grades		
Created By:	ESOF 328 students	Last Updated By:	Garrett Brown
Date Created:	2/10/2014	Date Last Updated:	2/24/2014

Actors:	Faculty Member
Description:	Send student grades via Excel
Trigger:	The user signals desire to distribute email
Preconditions:	1. User is in an Excel spreadsheet which contains student grades appropriately organized 2. The *Developer* menu has been enabled in Excel 3. The script has been added to the Excel macro list 4. User has obtained permission to distribute grades via email from some students listed in the grade spreadsheet
Postconditions:	1. Emails containing grades have been sent to those students with email addresses in the spreadsheet, who also gave permission for their grades to be distributed via email
Normal Flow:	1. User provides a subject 2. User provides a date 3. User provides any other customizing info 4. User is shown what the email will look like 5. User provides confirmation that email should be sent 6. An email containing grades is sent to each student in the spreadsheet who opted in.
Alternative Flows:	1. At step 3 - a message alerts user if no subject is entered 2. At step 4 - a message alerts user if no date is entered 3. At any of steps 3 through 7 - terminate use case (with the

	spreadsheet still open) if the user indicates a desire to cancel
Exceptions:	1a. Subject is left blank 1b. System notifies user to fill in subject 2a. Date is left blank 2b. System notifies user to fill in date 3a. User closes the spreadsheet 3b. System terminates use case 4a. User exits Excel 4b. System terminates use case 5a. The set of students to receive emails containing grades is the empty set 5b. System notifies user that no emails will be sent
Includes:	None
Priority:	High
Frequency of Use:	Depends on instructor
Business Rules:	1. Student must have opted in by responding to an email that they want grades emailed to them
Special Requirements:	1. Spreadsheet is standardized 2. User can cancel at anytime before step 8 in normal flow where the grades are sent.
Assumptions:	1. Grades are in standardized format for Excel 2. Students have opted in
Notes and Issues:	

Use Case Name:	Request Opt-In

Created By:	ESOF 328 students	Last Updated By:	Garrett Brown
Date Created:	2/11/2014	Date Last Updated:	2/24/2014

Actors:	Faculty Member
Description:	Send email to students to obtain permission to distribute grades via emails.
Trigger:	User signals desire to obtain student permission.
Preconditions:	1. User is in an Excel spreadsheet which contains student email addresses 2. The *Developer* menu has been enabled in Excel 3. The script has been added to the Excel macro list
Postconditions:	1. Emails have been sent to those students with email addresses in the spreadsheet, requesting their permission to have grades sent to them via email in the future
Normal Flow:	1. User navigates to the *Developer* menu 2. User navigates to the macros menu and runs the script 3. User selects a file containing a message to be sent out 4. The spreadsheet is parsed and emails are distributed to students

Alternative Flows:	1. User uses default file and the spreadsheet is parsed and emails are distributed to students
Exceptions:	The spreadsheet is not parsed due to formatting issues and the script returns an error
Includes:	
Priority:	Critical
Frequency of Use:	One to three times per semester
Business Rules:	……
Special Requirements:	
Assumptions:	Faculty members want to acquire the permission of students electronically
Notes and Issues:	Student options when responding to the request are TBD