

Student 1 Interface
Software Requirements Specification

Version 1.0

Team MC Squared

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Table of Contents

Section	Page
1. Preface	3
2. Introduction	3
3. Glossary	4
4. User Definition Requirements	5
4.1 All Events Table	5
4.2 Regrade Submission Form	6
4.3 Transaction ID	8
5. System Architecture	8
6. System Requirements Specification	11
7. System Model	12
8. System Evolution	13

1. Preface

This Software Requirements Specification (SRS) is intended for both users of the Student One Interface and administrators evaluating its potential use. It is also useful to any maintainers of the interface's codebase. Version One of the SRS covers the interface at the time of Release Two, which occurred at Week 11 of the Design Process. The most recent version and its corresponding version may be found at the Project Website at <http://www.cise.ufl.edu/~jplew>.

2. Introduction

Often, a graded assignment will be returned to a student, who will have some issues with the grades that they have received. This may or may not be the result of a grader error, or a poorly designed question; in any event, the potential exists that a student should have received a higher grade on their work. Therefore, the student will submit the assignment to be regraded. For most large classes, several of these regrade requests will occur after an assignment is returned. Furthermore, since several assignments may be returned in a short period of time, then a system needs to be developed that will organize the process, and not allow such requests to fall through the cracks.

The Student 1 Interface has been developed to help fit this requirement. The Interface connects to existing databases being developed by another design team that contains information about assignments, and displays this information to the user, which in this case would be a student. The list includes all potential assignments, or events, which can be submitted for a regrade, and allows the user to submit a request for a regrade of an individual question, or items. The interface then allows the user to enter necessary information about the regrade request. Student 1 will then go back to the databases and enter in this information.

The student may then request a table of all current regrade requests, or transactions. Each transaction has a unique Transaction ID, or TID, which is emailed to the student upon the submission of the request.

In summary the Student 1 interface is part of an overall system to meet the organizational requirements necessary to manage the regrade process. The interface stores no information on its own, but instead connects to and modifies databases being developed by another team. The transactions initiated by the Student 1 Interface are then modified later in the regrade process through yet more interfaces being developed by other teams.

3. Glossary

All Events Table	Table showing all potential items that are available for regrading. First page shown to a user upon entering the Student 1 Interface.
Assignment	Any student work turned in to an Instructor or Teaching Assistant for a grade, including homework, tests, or projects
Event	An Assignment that can be submitted for a regrade
Host Computer	Computer the Student 1 Interface resides on
Interface	The Student 1 Interface
Interface System	The overall system for controlling the regrade submission process, including its multiple interfaces and database structure.
Item	An Individual Question in an Assignment
Project Schema	The Structure of the Databases that the Interface connect to
Staff	Professor, Graders, and Teaching Assistants for a Course
SRS	Software Requirements Specification.
TA	Teaching Assistant
TID	Transaction ID. 8 Digit Number, unique for every request.
Transaction	A current regrade request

4. User Requirements Definition

4.1 All Events Table

The User may access the Student1 Interface through a link on a webpage. The page may be viewed in any web browser (Mozilla, Internet Explorer, etc.) After the link is clicked, the Interface will access a database to retrieve necessary information on items available for regrading. Only items including all the required information are displayed. A table of this data is then presented to the user, called the *All Events Table*. Table 1 describes the information included in this table.

Table 1: <i>All Events Table</i> Data Definitions	
Label	Description
Submit	Submit Button. Clicking this will result in beginning the process of requesting a regrade of the item in question.
Event	The name of the event in question. Possible events include Test1, Quiz2, etc.
Item	The name of the item. Includes Question1, Question2, etc.
Available Date	The first date where the user can first initiate a regrade request for this item
Expiration Date	The last date where the user can initiate a regrade request for this item.
Section	The Section for the regrade request in question.
Grader	The specific grader for all regrade requests from a section for the item in question.

A screen shot of the *All Events Table* is shown in Figure 1. A user should identify the row for the item that they wish to initiate a regrade request for, and press its submit button. Multiple rows may appear for a specific item, because it is available for multiple sections. The user should use the row for the section that they are enrolled for. They should also take note of the grader who is assigned for their specific item and question, since any correspondence beyond that of the Interface System will have to be directed to that grader.

Submit	Event	Item	Available Date	Expiration Date	Section	Grader
This Item	test9	question1	23-JAN-03	30-JAN-03	2455	Dr. Evil
This Item	test9	question2	23-JAN-03	30-JAN-03	2455	Naked Guy
This Item	test8	item1	02-JAN-03	20-JAN-03	1111	Dr. Evil
This Item	test8	item2	02-JAN-03	20-JAN-03	1111	Naked Guy
This Item	test8	item3	02-JAN-03	20-JAN-03	1111	Nsn
This Item	Test10	Question1	03-MAR-03	05-MAR-03	1111	Dr. Evil
This Item	test8	item1	02-JAN-03	20-JAN-03	2222	Nsn
This Item	test8	item2	02-JAN-03	20-JAN-03	2222	Dr. Evil
This Item	test8	item3	02-JAN-03	20-JAN-03	2222	Naked Guy

Figure 1: All Events Table Webpage

4.2 Regrade Submission Form

Upon the selection of a specific item, the browser will automatically update to the *Regrade Submission Form* webpage. This page will allow the user to actually initiate a request for a regrade, or transaction, of the item they just selected after entering some information into an online form. Table 2 describes the data required of the user. The *Regrade Submission Form* page is shown in Figure 2. At the top of the page the information from the *All Events Table* for the item in question is reprinted. The user should check this to ensure that it is correct. After entering the data, the user should select the *Get TID* submission button. This will actually initiate the regrade submission process.

Table 2: Regrade Submission Form	
Label	Description
First Name	User's First Name
Last Name	User's Last Name
UF ID	Assigned Eight Digit University of Florida ID Number. Located on the User's Gator 1 Card
E-Mail	Email Address the User wishes to use for the regrade process
Description of Problem	Short Explanation of what the User thinks is wrong with how the item was graded.

Prototype User Interface

Event	Item	Available Date	Expiration Date	Section	Grader
test9	question2	23-JAN-03	30-JAN-03	2455	Naked Guy

First Name: (* No Illegal Characters)
John

Last Name: (* No Illegal Characters)
Smith

UF ID: (* Must be 8 digits)
12345678

E-mail: (* Must be a valid e-mail address)
jsmith@ufl.edu

Description of Problem
Enter the description of your grading problem here.

Get TID

Show Table

Figure 2: Regrade Submission Form

The data that the user enters must be valid. All of the entries must be filled in. Furthermore, the UFID must be 8 digits, and a valid email address must be submitted. Failure to do this will result in an error message being displayed when the *Get TID* button is selected.

4.3 Transaction ID (TID)

Upon the initiation of a valid transaction, the Student 1 Interface stores the user's data into the database. The browser is updated to show a *Transaction Verification* page that verifies that the transaction has been initiated. Furthermore, an email is sent to the address submitted to verify the regrade request, and to send to the user an eight digit Transaction ID, or TID. Every transaction has a unique TID, which will be used by both the students and the staff to reference a specific regrade request.

4.4 Transaction Table

The user has the option from either the project home page, the *Regrade Submission Form*, or the *Transaction Verification* page to view a table that lists all of the current transactions in the system. This table is accessed by clicking the *Show Table* submission button. A Sample table is shown in Figure 3. The definitions of most of the data in the table can be found in Tables One and Two. The transactions are ordered by submission time. The TID definition can be found in Section 4.3. The Table also displays the status flag, which shows the current status of the transaction in the regrade submission process. The definition of the Status Flag bits can be found in Section 5.2

5. System Architecture

5.1 Regrade Submission Process

The Student 1 Interface is the first step for a student to begin the process of submitting a regrade request for an item. Interfaces for other steps in the process are being developed by other Design Teams, as is the database structure that all the Interfaces connect to. Table 3 describes the separate interfaces being developed, and Figure 3 shows the Regrade Submission Process and all Interface locations in that system.

Table 3: Interfaces	
Interface	Description
Student 1	Create a new transaction, receives TID
Student 2	View and edit a transaction, based on TID
TA 1	Login, create a new transaction for a student, view existing transactions
TA 2	Process and Review Transactions, Update Status
Instructor	Login, Review and Process Transactions

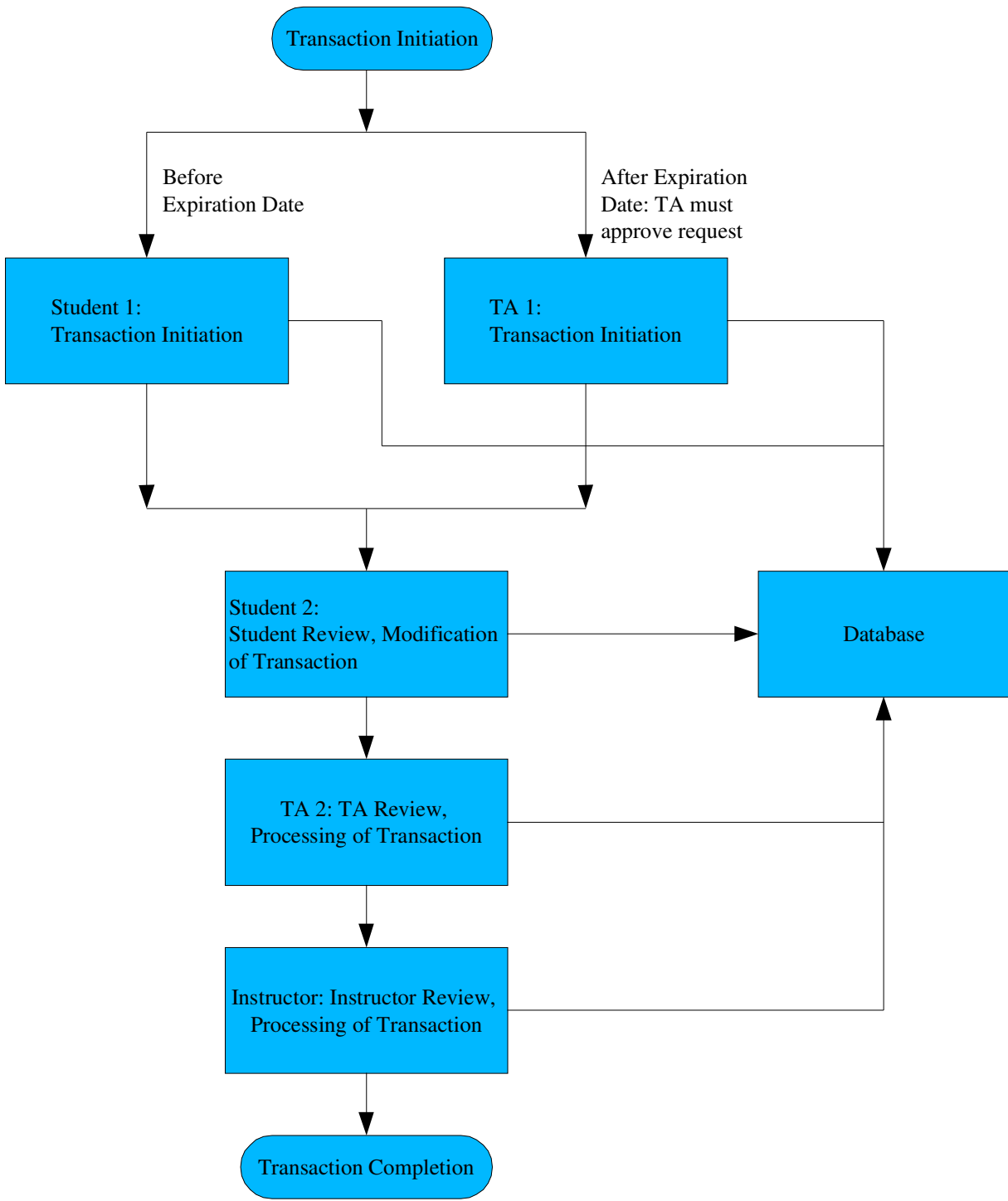


Figure 3: Regrade Submission Process and Interfaces

5.2 Status Flag Definitions

The aforementioned status flags are used to keep track of a transaction as it works its way through the regrade submission process shown in Figure 3. This information is included in the data displayed in the *Transaction Table*, described in Section 4.4. The definition of the Status Flag bits is shown in Table 4, and the definition of the States is shown in Table 5

Table 4: Status Flag Bit Definitions			
Bit	Name	0	1
0	TA Submit	Student Submitted	TA Submitted
1	Documents Submitted To TA by Student	Documents Not Submitted	Documents Submitted
2	Documents Submitted To Professor by TA	Documents Not Submitted	Documents Submitted
3	Final Review by Professor	Final Review not Complete	Final Review Complete

Table 5: Status Flag Definitions				
Status Flag Bits				
3	2	1	0	Meaning
0	0	0	0	Initial State, Transaction Initiated by Student
0	0	0	1	Initial State, Transaction Initiated by TA
0	0	1	0	Student Initiated, Documentation Submitted by Student to TA
0	0	1	1	TA Initiated, Documentation Submitted by Student to TA
0	1	1	0	Student Initiated, Documentation Submitted by TA to Professor
0	1	1	1	TA Initiated, Documentation Submitted by TA to Professor
1	1	1	0	Student Initiated, Professor Has Completed Final Review
1	1	1	1	TA, Professor Has Completed Final Review

6. System Requirements Specification

- The Student 1 Interface must be accessed through a web-based system
 - Interface Must Be accessed through a webpage / hyperlink
 - Interface Must be Viewable in Recent Versions of the Standard Browsers
 - MS Internet Explorer 6
 - Mozilla 1.0
- The Initial Interface must reside on the CISE server
 - Must not require Components to reside on systems outside the CISE network
 - The Interface must no require software that is not already installed on the CISE Server
- Must Access and Utilize the Database being developed by the Config Team
 - Uses the Oracle 9i Systems
 - Database organized as shown in Table 5.
- Must allow a student to Select From a Table a Specific Event, Item and Section to initiate a regrade request. After entering required information, the Student 1 Interface must insert the data into the database that stores everything.

7. System Model

The Student 1 Interface does not actually store data. Instead, it accesses information from a database that resides on its host computer, and also stores user data to it. All of the interfaces that make up the regrade submission process use this repository, which is built around Oracle 9i. The Database Structure is shown in Table 6.

Table 6: Database Structure			
Name	Type, Max	Primary Key	Description
Table events: Lists all Events available for regrading			
eventName	Variable, 25	*	Event (Quiz1, Test2, etc.)
Table eventItems: Lists all Items and the Events they are in			
eventName	-	*	Referenced from events Table
itemName	Variable, 25	*	Item (Question Number)
Table sections: Lists all Sections in the Course			
sectionNumber	4 Characters	*	Section Numbers
Table Staff: List of all Staff for the Course			
staffName	Variable, 50	*	Name of Staff Member
Table: Graders: Lists all Graders and What Sections, Event, and Items They are Assigned to.			
eventName	-	*	Referenced from eventItems Table
itemName	-	*	Referenced from eventItems Table
sectionNumber	-	*	Referenced from sections Table
grader	-		Referenced from Staff Table
Table ExpiryDates			
eventName	-	*	Referenced from eventItems Table
sectionNumber	-	*	Referenced from sections Table
dataAvailable	Date		Date that an item is first available for regrading
expiryDate	Date		Last Date that an item can be submitted for regrading
Table passwords			
description	Variable		Description of What Password is for
pwd	8 Characters		Password

Table 6: Database Structure			
Name	Type, Max	Primary Key	Description
Table Transactions: Lists all Current Transactions			
TID	8 Characters	*	Transaction ID
lastName	50 Characters		Last Name of Student Who is asking for a Regrade
firstName	50 Characters		First Name of Student
ufid	8 Characters		UF ID of Student, Located on Gator 1 Card
email	100 Characters		Email Address of Student
eventName	-		Referenced from Graders Table
itemName	-		Referenced from Graders Table
sectionNumber			Referenced from Graders Table
statusFlag	2 Numbers		Shows Progress of Transaction through Regrade Process
taComment			Comments on Transaction by TA
instructorComment			Comments on Transaction by Instructor

8. System Evolution

At this point, the Student 1 Interface meets the System Requirements Specification using a mixture of HTML, PERL, the ORACLE / PERL interface, and Javascript. Modifications to the overall Interface will be made to improve the user experience in initiating a regrade transaction. Furthermore, as changes are made to the host computer, the Interface will have to be modified, both to support future versions of currently utilized software and to take advantage of any new software that may be installed.