

# International Etruscan Sigla Project Software Requirements Specification Team Spannabe

## I. Introduction

### A. Purpose

The purpose of the Software Requirements Specification document is to clearly define the system for the International Etruscan Sigla Project (IESP). The intended audience of this document is the team working on the IESP and the development team.

### B. Scope of the System Specified

The team working on the sigla project wants to create a system that stores information about the various artifacts that they collect during their studies. The researchers working on the project will be able to publish information about the artifacts they are studying. The general public will be able to view the artifacts through a web server.

## C. Definitions, Acronyms, and Abbreviations

Researcher	Person working on project who has permission to post material on the website
Contributor	Synonym for Researcher
Functional requirement	A service provided by the software system
Non-functional requirements	A constraint on the system or how the system is developed
Artifact	A physical object with one or more sigla on it
Sigla	Etruscan nonverbal writings
SRS	Software Requirements Specification document
IESP	International Etruscan Sigla Project
Entry	A posting of a single artifact on the web server that includes text, photos and drawings
Collection	Group of entries
EID	Entry Identification Number
CID	Collection Identification Number

## D. References to Supporting Documents

There are none at this time.

## E. Overview of rest of SRS

Section 2 of the SRS describes the product in more detail. Section 3 provides a complete list of the functional requirements of the intended system. Section 4 provides the non-functional requirements. Section 5 shows the class diagram, and Section 6 the use case diagram. The appendices appear next.

## **II. General Description**

### **2. Product Perspective**

The system is web-based, providing functionality to users through a web browser. It interfaces with a database that stores all of the relevant information regarding the authorized personnel, and the Etruscan artifacts. The system provides a secure environment for authorized personnel to submit information and manage data about Etruscan artifacts so that associations may be analyzed and better understood.

### **3. Product Functions**

The system allows public users to search entries by means of keywords, browsing trees, and by choosing from a list of similar entries. They may also view entries on the site and retrieve a citation of the corresponding artifact entry.

Authorized personnel have the ability to log into the system and manipulate the data. They're split into two categories, contributors and system administrators.

A contributor has the ability to manipulate data by creating entries, creating collections of entries and modifying collections as well as unpublished entries. They also have the ability to add additional information to each entry. A contributor may choose to make data official and publish an entry to be displayed. Once published, they may no longer modify an entry. Each contributor also has the same abilities as public users.

A system administrator is allowed to manage contributor accounts as well as modify published entries. Because a contributor must be verified before their account is activated, this is an important task to the system. Also, they are the only one who may modify any data once it's been published so that the system remains stable and accurate. System Administrators have the additional permissions of both contributors as well as public users.

### **4. User Characteristics**

Interaction with the system is carried out by the three groups of public users, contributors and system administrators. A public user is anyone who is accessing the system without the need for any special permissions. They are limited in functionality, but require nothing more than the knowledge of how to use a web browser.

A contributor is someone who has been authorized to log into the site and modify data. They must be familiar with the format of the system as well as the relevant data for an artifact entry. This may require minimal training in order to familiarize oneself with the system. A contributor has the ability to organize entries in the form of a collection to provide more ease of use.

A system administrator is someone who has authorization to log into the site, as well as modify publish and unpublished entries. It is the responsibility of a system administrator to verify and manage contributor accounts. They must be very familiar with the system and understand the requirements of entries and contributors. They have the highest permissions in the system and may modify data that has been published and is important to keep consistent.

### **5. General Constraints**

The system provides web access for all users. The user interface should be intuitive enough so that there is no training required to search and view entries or generate citations. Contributors and system administrators must also be able to easily understand the system and how to create and modify data appropriately. All data of authorized personnel as well as

artifact information will be stored securely. Persistent information on all artifacts and authorized personnel will be maintained.

### **6.Assumptions and Dependencies**

There are no assumptions or dependencies at this time.

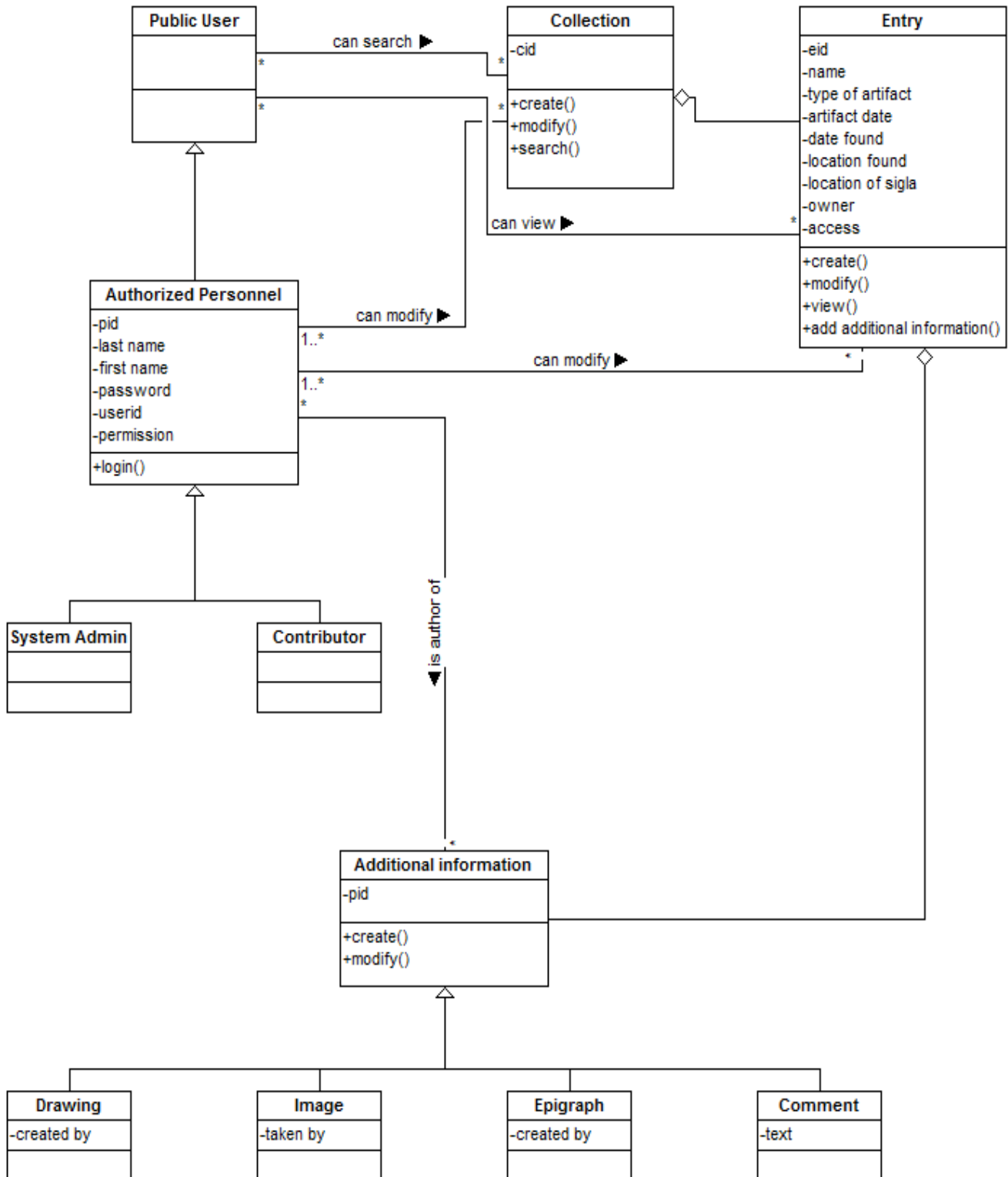
### **3. Functional Requirements**

- 3.1 The system shall store text data.
- 3.2 The system shall store images and drawings.
- 3.3 The system shall store epigraphs.
- 3.4 The system shall allow researchers to create entries.
- 3.5 The system shall allow researchers to modify their own non published entries.
- 3.6 The system shall number entries with unique key.
- 3.7 The system shall make researchers log in to the system for authorized access.
- 3.8 The system shall allow researchers to create comments.
- 3.9 The system shall allow the public to view the collection.
- 3.10 The system shall allow researchers to mark entries as: private(incomplete), protected(under peer review), public(published).
- 3.11 The system shall enable a researcher to provide protected access to ones data for other researchers.
- 3.12 The system shall allow researchers to tag an entry with a keyword.
- 3.13 The system shall generate citations for entries.
- 3.14 The system shall allow only the system administrator to modify entries after publishing.
- 3.15 The system shall allow researchers to create collects of entries.
  - 3.15.1 The system shall allow researchers to modify their collections.
- 3.16 The system shall allow the administrator to modify contributors accounts.
- 3.17 The system shall provide graphical annotation for artifact images.
- 3.18 The system shall provide detail data for the entries.

### **4. Non-Functional Requirements**

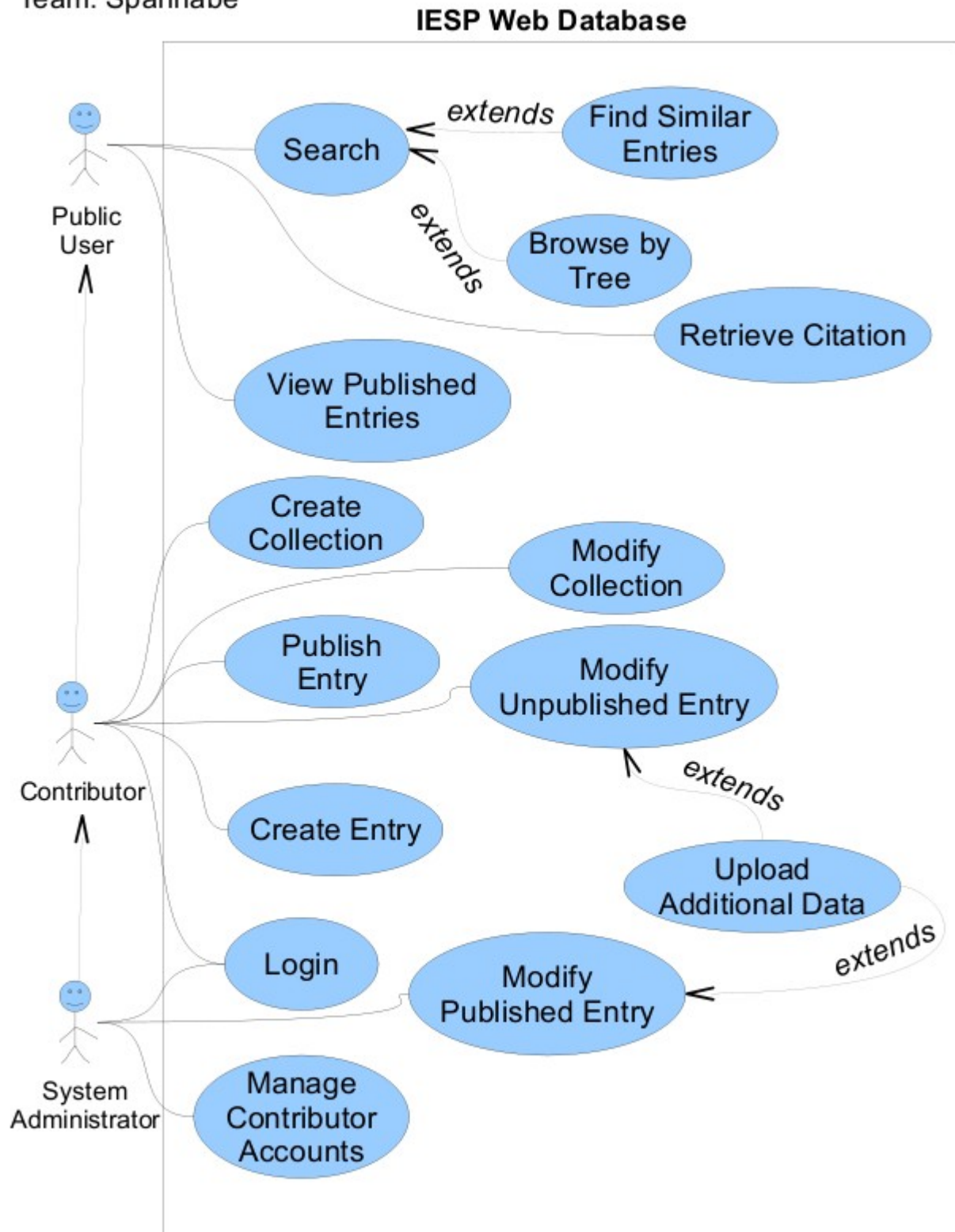
- 4.1 The system shall allow for secure log in for researchers and system administrators.
- 4.2 The system shall provide an intuitive user interface.
  - 4.2.1 The system shall provide an easy to use data entry form for researchers.
- 4.3 The system shall provide persistent storage of all data.
- 4.4 The system shall provide support for multiple languages.
- 4.5 The site shall have a consistent format.
- 4.6 The site shall be coded in a uniform software language.
- 4.7 The site shall be usable in multiple browsers.

## 5. Class Diagram



## 6. Use Case Diagram

Team: Spannabe



rev. 2

## Appendix A. Class and Actor Descriptions

<b>Name</b>	Additional Information
<b>Description</b>	a resource associated with an Entry

### Attributes

Name of Attribute	Data Type	Description
rid	integer	unique resource number

### Methods

Method Signature	Description
create()	create a new info object
modify()	modify an existing info object

### Relationships

Class Name	Type of Relationship	Comments
Drawing	Parent	
Image	Parent	
Epigraph	Parent	
Comment	Parent	

<b>Name</b>	Authorized Personnel
<b>Description</b>	actor who has greater access through logging in

### Attributes

Name of Attribute	Data Type	Description
pid	integer	unique number for the user
last_name	string	last name of the user
first_name	string	first name of the user
userid	string	user id of the user
password	string	user-defined password
permission	enum	what level of permission the user has

### Methods

Method Signature	Description
create()	create a new user account
login()	logs the user into the system

### Relationships

Class Name	Type of Relationship	Comments
System Admin	Parent	a System Administrator is a type of Authorized Personnel
Contributor	Parent	a Contributor is a type of Authorized Personnel
Public User	Child	Authorized Personnel are like Public Users with greater privileges and a designated login.

<b>Name</b>	Collection
<b>Description</b>	object representing a container of Entry objects

### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
cid	integer	unique number identifying the collection

### Methods

<b>Method Signature</b>	<b>Description</b>
create()	create a new collection
modify()	modify the contents of an existing collection
search()	search for an entry in the collection
add_entry()	add an entry to the collection

### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Entry	Child	a collection contains entries

<b>Name</b>	Comment
<b>Description</b>	a resource associated with an Entry

### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
text	string	the text of the comment
author	string	the author of the comment

### Methods

<b>Method Signature</b>	<b>Description</b>
none	

### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Additional Information	Child	an Comment is a type of Additional Information

<b>Name</b>	Drawing
<b>Description</b>	a resource associated with an Entry

### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
image	image	image data
created_by	string	illustrator of this image

### Methods

<b>Method Signature</b>	<b>Description</b>
none	

### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Additional Information	Child	a Drawing is a type of Additional Information

<b>Name</b>	Entry
<b>Description</b>	object representing a sigla entry in the database

### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
eid	integer	unique number for this artifact
name	string	name of the entry
owner	Contributor	researcher who created this entry
date_found	date	date of the find
date_original	date	date of the artifact
location_found	string	where the artifact was found
access_mode	Enum	for this entry (public, private, protected)
artifact_type	string	the type of artifact for this entry
sigla_location	string	location of the sigla on the artifact

### Methods

<b>Method Signature</b>	<b>Description</b>
create()	create a new entry
modify()	modify existing entry data (allowed based on permissions)
view()	return all of the data for this object for display
add_info()	associate additional information, such as images

### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Contributor	Association	a contributor owns an entry
Additional Information	Child	Other info tied to the entry.
Collection	Parent	An entry can be part of a collection.



<b>Name</b>	Epigraph
<b>Description</b>	a resource associated with an Entry

#### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
vector	blob	path information of the epigraph
created_by	string	creator of this epigraph

#### Methods

<b>Method Signature</b>	<b>Description</b>
none	

#### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Additional Information	Child	an Epigraph is a type of Additional Information

<b>Name</b>	Image
<b>Description</b>	a resource associated with an Entry

#### Attributes

<b>Name of Attribute</b>	<b>Data Type</b>	<b>Description</b>
image	data	image data
taken_by	string	photographer of this image
date_taken	date	date this image was taken

#### Methods

<b>Method Signature</b>	<b>Description</b>
none	

#### Relationships

<b>Class Name</b>	<b>Type of Relationship</b>	<b>Comments</b>
Additional Information	Child	an Image is a type of Additional Information

## Use Case Descriptions

<b>Name</b>	Login
<b>ID</b>	1
<b>Requirement Number</b>	3.7
<b>Description</b>	A user logs into the system with their username and password
<b>Primary Actor</b>	Contributor
<b>Secondary Actor(s)</b>	System Administrator
<b>Pre-condition</b>	User has an account
<b>Post-condition</b>	User will be logged into the system as either a contributor or a system administrator. User will now have the appropriate options to modify data.
<b>Trigger</b>	User chooses "Login" option

### Normal Scenario

1.	User inputs username into username text field.
2.	User inputs password into password text field.
3.	User chooses "Login" button.
4.	System validates login information.
5.	System displays "Successful login" message.

### Extensions

4.1	Login validation fails due to incorrect or missing information 4.1.a System displays a failed login message. 4.1.b System clears the login and password fields.

<b>Name</b>	Search
<b>ID</b>	2
<b>Requirement Number</b>	3.10
<b>Description</b>	The user searches the system based on keywords
<b>Primary Actor</b>	Public User
<b>Secondary Actor(s)</b>	Contributor, System Administrator
<b>Pre-condition</b>	User has accessed site and typed keyword(s) into the search field.
<b>Post-condition</b>	System will display artifact pages relevant to keywords
<b>Trigger</b>	User chooses the "Search" option

### Normal Scenario

<b>1.</b>	User enters keywords into search text field.
<b>2.</b>	User optionally changes the search criteria (default is all types) which includes researcher, sigla, keywords, year found, etc.
<b>3.</b>	User clicks "search button".
<b>4.</b>	System tokenizes all the words entered into search text field.
<b>5.</b>	System checks the database for any artifacts with criteria matching keyword.
<b>6.</b>	System adds artifacts to a list.
<b>7.</b>	Repeat steps 5-6 as necessary.
<b>8.</b>	System displays a list of possible artifacts ranging from most relevant to least relevant (relevant meaning most matching criteria).

### Extensions

<b>4.1</b>	Search field is blank 4.1.a System displays "No search information" message.
<b>6.1</b>	Nothing matching current keyword exists 6.1.a Move to the next keyword without adding anything

<b>Name</b>	Retrieve Citation
<b>ID</b>	3
<b>Requirement Number</b>	3.14
<b>Description</b>	The system provides a citation of the artifact's site.
<b>Primary Actor</b>	Public Citation
<b>Secondary Actor(s)</b>	Contributor, System Administrator
<b>Pre-condition</b>	User is viewing artifact information
<b>Post-condition</b>	System displays citation for artifact webpage being viewed.
<b>Trigger</b>	User chooses "Generate Citation" option.

### Normal Scenario

1.	System gathers artifact information.
2.	System creates a formatted citation for reference use according to APA standards.
3.	System creates new window.
4.	System displays citation in new window.

### Extensions

3.1	System cannot create new window 3.1.a Display window creation error message.

<b>Name</b>	Create Entry
<b>ID</b>	5
<b>Requirement Number</b>	3.4
<b>Description</b>	Defines how the contributor and system administrator create new entries to the system
<b>Primary Actor</b>	Contributor or System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	User must have contributor or system administrative permissions
<b>Post-condition</b>	A newly created entry exists in the system, user logged into the system
<b>Trigger</b>	User selects to create a new entry

### Normal Scenario

1.	User selects option to create new entry
2.	System provides a form with fields and text boxes to add new data
3.	User adds all data corresponding to the new entry
4.	User saves new entry
5.	System provides a successful message that new data has been updated
6.	User logs out of the system

### Extensions

5.1	Formatting of form fields is wrong 5.1.a – Provide the user with an error message and allow for changes to be made to the form
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<b>Name</b>	Upload Additional Data
<b>ID</b>	4
<b>Requirement Number</b>	3.5
<b>Description</b>	Defines how the contributor and system administrator upload additional data to already publish entries
<b>Primary Actor</b>	Contributor or System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	A published entry already exist, user must have contributor or system administrative permissions, user logged into the system
<b>Post-condition</b>	Entry has been updated
<b>Trigger</b>	User selects to add new data to existing entry

### Normal Scenario

<b>1.</b>	User selects to search for an entry
<b>2.</b>	System provides a pop up window to find a particular entry
<b>3.</b>	User selects an entry
<b>4.</b>	User selects option to upload additional data to an entry
<b>5.</b>	System provides a form with fields and text boxes to add new data
<b>6.</b>	User adds all new data corresponding to the entry
<b>7.</b>	User saves additional data to entry
<b>8.</b>	System provides a successful message that the new data has been updated
<b>9.</b>	User signs out of system

### Extensions

<b>3.1</b>	Chosen entry does not exist: 3.1.a – User creates a new entry into system
<b>8.1</b>	Formatting of form fields is wrong 8.1.a – Provide the user with an error message and allow for changes to be made to the form

<b>Name</b>	Publish Entry
<b>ID</b>	6
<b>Requirement Number</b>	3.10
<b>Description</b>	Defines how the contributor and system administrator publish newly created entries to the system
<b>Primary Actor</b>	Contributor or System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	User must have contributor or system administrative permissions, a created entry must exist, user logged into the system
<b>Post-condition</b>	A newly published entry in the system viewable to all users
<b>Trigger</b>	User selects to publish a completed entry

### Normal Scenario

1.	User selects to search for an entry
2.	System provides a pop up window to find a particular entry
3.	User selects an entry
4.	User selects option to publish completed entry
5.	System provides a form with fields and text boxes to revises entry data
6.	User changes any fields if necessary
7.	User chooses to publish entry
8.	System provides a successful message that new data has been updated
9.	User logs out of the system

### Extensions

1.1	Entry does not exist: 1.1.a – User creates new entry, go to step 4
8.1	Formatting of form fields is wrong 8.1.a – Provide the user with an error message and allow for changes to be made to the form

<b>Name</b>	Modify Collection
<b>ID</b>	7
<b>Requirement Number</b>	03/15/01
<b>Description</b>	Defines how the contributor and system administrator modify existing collections of entries
<b>Primary Actor</b>	Contributor or System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	User must have contributor or system administrative permissions, a collection must already exist, user logged into the system
<b>Post-condition</b>	An updated existing collection with specified changes made to it
<b>Trigger</b>	User selects to modify specific collection

### Normal Scenario

1.	User selects to search for a collection
2.	System provides a pop up window to find a particular collection
3.	User selects a collection
4.	User selects option to modify collection

5.	System provides a form with fields and text boxes to revise collection data
6.	User modifies collection
7.	User saves modifications to collection
8.	System provides a successful message that new data has been updated
9.	User logs out of system

### Extensions

1.1	Collection does not exist: 1.1.a – User makes collection of specified entries, go to step 4
8.1	Formatting of form fields is wrong 8.1.a – Provide the user with an error message and allow for changes to be made to the form

<b>Name</b>	Modify Unpublished Entry
<b>ID</b>	8
<b>Requirement Number</b>	3.5
<b>Description</b>	This use case defines how a contributor can modify their unpublished entries.
<b>Primary Actor</b>	Contributor
<b>Secondary Actor(s)</b>	System Administrator
<b>Pre-condition</b>	An unpublished entry exists.
<b>Post-condition</b>	An unpublished entry is modified.
<b>Trigger</b>	Contributor selects the Modify Unpublished Entry option in the system.

### Normal Scenario

1.	Contributor logs in to the system.
2.	Contributor selects which of his entries to modify.
3.	Contributor changes text, photos or drawings for the entry.
4.	Contributor saves his changes.
5.	Changes are written to the database.
6.	Contributor logs out of the system.

### Extensions

6.1	Contributor has not saved changes: 6.1a System prompts user to see if he wants to save changes.

<b>Name</b>	Modify Published Entry
<b>ID</b>	9
<b>Requirement Number</b>	3.15
<b>Description</b>	This use case defines how a published entry may be modified.
<b>Primary Actor</b>	System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	A Published entry with an error exists.
<b>Post-condition</b>	A Published entry is modified.
<b>Trigger</b>	System Administrator selects the Modify Published Entry option in the system.

### Normal Scenario

1.	System Administrator logs in to the system.
2.	System Administrator finds the entry with an error.
3.	System Administrator fixes the error.
4.	System Administrator saves the changes.
5.	Changes are written to the database.
6.	System Administrator logs out of the system.

### Extensions

4.1	The System reminds the user that the entry has been published 4.1a System prompts user to make sure he wants to save changes.

<b>Name</b>	Manage Contributor Accounts
<b>ID</b>	10
<b>Requirement Number</b>	3.16
<b>Description</b>	This use case defines how Contributor accounts are created.
<b>Primary Actor</b>	System Administrator
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	A System Administrator and another person exist.
<b>Post-condition</b>	A Contributor account is created or the request is denied.
<b>Trigger</b>	A person requests creation of a Contributor account.

### Normal Scenario

1.	System Administrator logs in to the system.
2.	System Administrator looks up the account request.
3.	System Administrator evaluates the requester.
4.	System Administrator decides if the request will be granted.
5.	If the request is granted the account is created, otherwise nothing happens.
6.	System Administrator notifies the requestor of the decision.
7.	System Administrator logs out of the system.



<b>Name</b>	Browse by Tree
<b>ID</b>	11
<b>Requirement Number</b>	3.9
<b>Description</b>	This use case defines how the public can view the entries.
<b>Primary Actor</b>	Public User
<b>Secondary Actor(s)</b>	
<b>Pre-condition</b>	An Entry exists.
<b>Post-condition</b>	One or more Entries are viewed.
<b>Trigger</b>	A public user loads the website.

### Normal Scenario

<b>1.</b>	User clicks on a link to go to another page.
<b>2.</b>	Step 1 is repeated until the User finds an entry they wish to view.
<b>3.</b>	Steps 1 and 2 are repeated until the User is done looking.
<b>4.</b>	The User leaves the website.

### Extensions

<b>1.1</b>	User clicks on a link: 1.1a User is brought to another page or the menu he is clicking on changes to show more options.

## Attribute Descriptions

<b>Name</b>	rid
<b>Class Name</b>	AdditionalInformation
<b>Alternate Name(s)</b>	resource identifier
<b>Type</b>	integer
<b>Length</b>	any
<b>Output Format</b>	numeric
<b>Default Value</b>	-1
<b>Acceptable Values</b>	0 through MAX_INT
<b>Source (where value comes from)</b>	generated automatically
<b>Derivation Formula</b>	1 + rid of last generated value
<b>Description</b>	uniquely tags image and other data in the system
<b>Comments</b>	none

<b>Name</b>	firstname
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user, during account creation
<b>Derivation Formula</b>	none
<b>Description</b>	first name of the user
<b>Comments</b>	none

<b>Name</b>	lastname
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user, during account creation
<b>Derivation Formula</b>	none
<b>Description</b>	last name of the user
<b>Comments</b>	none

<b>Name</b>	password
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	6-10 characters
<b>Output Format</b>	string
<b>Default Value</b>	none
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user, during account creation
<b>Derivation Formula</b>	none
<b>Description</b>	the user's password
<b>Comments</b>	must meet minimum security requirements for password complexity

<b>Name</b>	permission
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	none
<b>Type</b>	enum
<b>Length</b>	n/a
<b>Output Format</b>	n/a
<b>Default Value</b>	PUBLIC
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	assigned by a system administrator to another account, based on their access permissions
<b>Derivation Formula</b>	none
<b>Description</b>	enum showing the access level of a certain user
<b>Comments</b>	not modifiable by anyone other than a system administrator

<b>Name</b>	pid
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	personnel id
<b>Type</b>	integer
<b>Length</b>	any
<b>Output Format</b>	numeric
<b>Default Value</b>	-1
<b>Acceptable Values</b>	0 through MAX_INT
<b>Source (where value comes from)</b>	generated automatically
<b>Derivation Formula</b>	1 + rid of last generated value
<b>Description</b>	uniquely id of a user
<b>Comments</b>	none

<b>Name</b>	userid
<b>Class Name</b>	Authorized Personnel
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	6-12 characters
<b>Output Format</b>	string
<b>Default Value</b>	lastname
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user, during account creation, contingent upon availability of the name
<b>Derivation Formula</b>	none
<b>Description</b>	the user's unique account username
<b>Comments</b>	none

<b>Name</b>	cid
<b>Class Name</b>	Collection
<b>Alternate Name(s)</b>	none
<b>Type</b>	integer
<b>Length</b>	any
<b>Output Format</b>	numeric
<b>Default Value</b>	-1
<b>Acceptable Values</b>	0 to MAX_INT
<b>Source (where value comes from)</b>	automatically generated when the collection is created
<b>Derivation Formula</b>	1 + the last cid generated
<b>Description</b>	the unique identifier of a collection
<b>Comments</b>	none

<b>Name</b>	author
<b>Class Name</b>	Comment
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	a username
<b>Source (where value comes from)</b>	the user who initiates comment creation
<b>Derivation Formula</b>	none
<b>Description</b>	the author of the comment
<b>Comments</b>	none

<b>Name</b>	text
<b>Class Name</b>	Comment
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user who initiates comment creation
<b>Derivation Formula</b>	none
<b>Description</b>	the main text of a comment
<b>Comments</b>	none

<b>Name</b>	created_by
<b>Class Name</b>	Drawing
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user upon creation of drawing resource
<b>Derivation Formula</b>	none
<b>Description</b>	the name of the individual who drew this drawing
<b>Comments</b>	none

<b>Name</b>	image
<b>Class Name</b>	Drawing
<b>Alternate Name(s)</b>	none
<b>Type</b>	Image
<b>Length</b>	n/a
<b>Output Format</b>	Image
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any Image data
<b>Source (where value comes from)</b>	the user upon creation of drawing resource
<b>Derivation Formula</b>	none
<b>Description</b>	the actual data of the drawing resource
<b>Comments</b>	none

<b>Name</b>	date_found
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	date
<b>Length</b>	any
<b>Output Format</b>	date
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the date the artifact was found
<b>Comments</b>	none

<b>Name</b>	date_original
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	date range
<b>Length</b>	any
<b>Output Format</b>	range of dates
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the approximate date of the artifact, as a range
<b>Comments</b>	the range is really two dates comprising the possible range of dates for the artifact

<b>Name</b>	eid
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	integer
<b>Length</b>	any
<b>Output Format</b>	numeric
<b>Default Value</b>	-1
<b>Acceptable Values</b>	0 to MAX_INT
<b>Source (where value comes from)</b>	automatically generated upon creation of new entry
<b>Derivation Formula</b>	1 + the last eid generated
<b>Description</b>	unique identifier of an entry in the system
<b>Comments</b>	none

<b>Name</b>	location_found
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the location where the artifact was found
<b>Comments</b>	could be a name, or even GPS values

<b>Name</b>	access_mode
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	enum
<b>Length</b>	n/a
<b>Output Format</b>	n/a
<b>Default Value</b>	PRIVATE
<b>Acceptable Values</b>	any valid enumeration
<b>Source (where value comes from)</b>	the user during creation or modification of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the user's designated access mode for the entry, determining who can see it
<b>Comments</b>	primarily of the form private, protected, and public

<b>Name</b>	name
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	eid
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the title assigned to the entry by the user, not necessarily unique
<b>Comments</b>	none

<b>Name</b>	owner
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	Contributor
<b>Length</b>	n/a
<b>Output Format</b>	n/a
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any valid contributor
<b>Source (where value comes from)</b>	automatically assigned based on the user who is creating the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the contributor who "owns" the entry
<b>Comments</b>	none

<b>Name</b>	sigla_location
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the described location of the sigla on the artifact
<b>Comments</b>	none

<b>Name</b>	artifact_type
<b>Class Name</b>	Entry
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user during creation of the entry
<b>Derivation Formula</b>	none
<b>Description</b>	the type of artifact
<b>Comments</b>	none



<b>Name</b>	created_by
<b>Class Name</b>	Epigraph
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	user creating the epigraph object
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user upon creation of the epigraph resource
<b>Derivation Formula</b>	none
<b>Description</b>	the individual who created the epigraph
<b>Comments</b>	none

<b>Name</b>	vector
<b>Class Name</b>	Epigraph
<b>Alternate Name(s)</b>	path
<b>Type</b>	blob
<b>Length</b>	n/a
<b>Output Format</b>	any
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any valid data representing the vector path of the epigraph
<b>Source (where value comes from)</b>	the user upon creation of the epigraph resource
<b>Derivation Formula</b>	none
<b>Description</b>	the actual vector data for the epigraph, usually machine generated file
<b>Comments</b>	all vectors should be stored to a similar file-type

<b>Name</b>	date_taken
<b>Class Name</b>	Image
<b>Alternate Name(s)</b>	none
<b>Type</b>	date
<b>Length</b>	any
<b>Output Format</b>	date
<b>Default Value</b>	creation date
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user upon creation of image resource
<b>Derivation Formula</b>	none
<b>Description</b>	the date the photo was taken
<b>Comments</b>	none

<b>Name</b>	image
<b>Class Name</b>	Image
<b>Alternate Name(s)</b>	none
<b>Type</b>	Image
<b>Length</b>	n/a
<b>Output Format</b>	Image
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any Image data
<b>Source (where value comes from)</b>	the user upon creation of image resource
<b>Derivation Formula</b>	none
<b>Description</b>	the actual data of the image resource
<b>Comments</b>	none

<b>Name</b>	taken_by
<b>Class Name</b>	Image
<b>Alternate Name(s)</b>	none
<b>Type</b>	string
<b>Length</b>	any
<b>Output Format</b>	string
<b>Default Value</b>	NULL
<b>Acceptable Values</b>	any
<b>Source (where value comes from)</b>	the user upon creation of image resource
<b>Derivation Formula</b>	none
<b>Description</b>	the name of the individual who took this photo
<b>Comments</b>	none

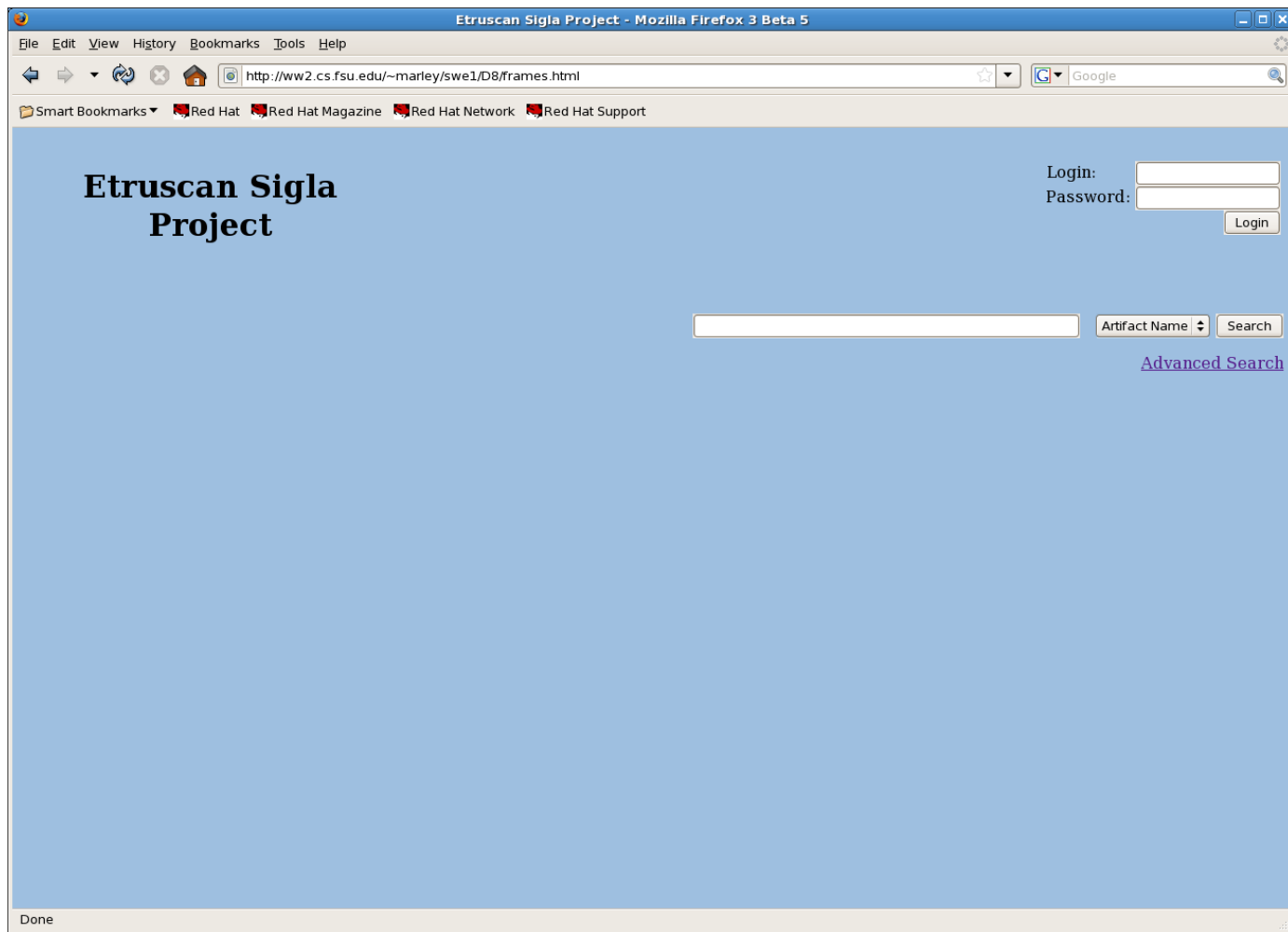
## Appendix B: Raw Use Case Analysis

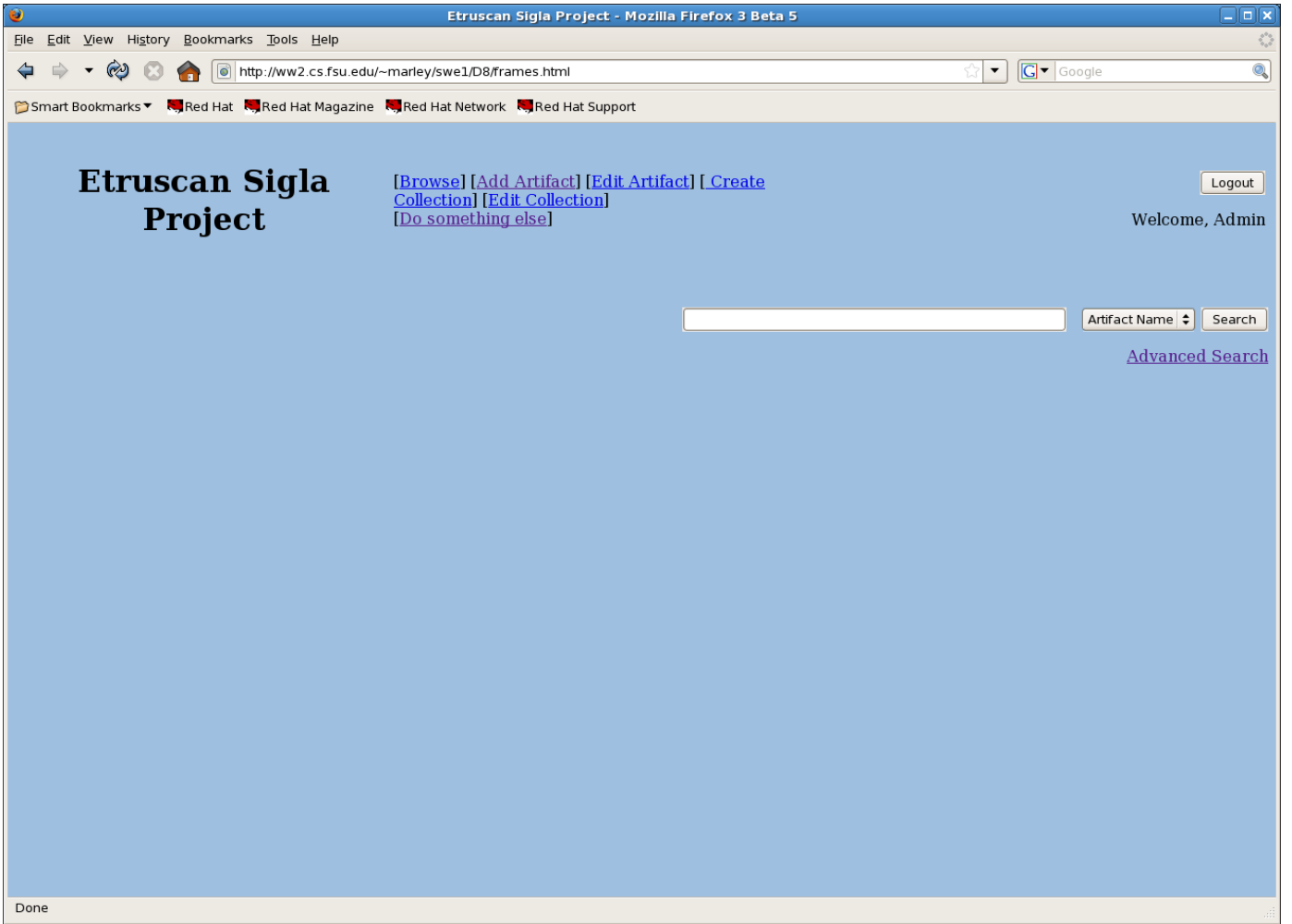
Use Case Name	Number of Transactions	Use Case Type	Use Case Points
Search	5	Average	10
Find Similar Entries	4	Average	10
Browse by Tree	4	Average	10
Retrieve Citation	3	Simple	5
View Published Entries	3	Simple	5
Create Collection	2	Simple	5
Modify Collection	2	Simple	5
Publish Entry	2	Simple	5
Modify Unpublished Entry	4	Average	10
Create Entry	2	Simple	5
Login	2	Simple	5
Upload Additional Data	4	Average	10
Modify Published Entry	3	Simple	5
Manage Contributor Accounts	1	Simple	5
		<b>Total:</b>	<b>95</b>

### Actor Points

Actor Name	Actor Type	Actor Points
Public User	Complex	3
Contributor	Complex	3
System Administrator	Complex	3
	<b>Total</b>	<b>9</b>

## Appendix C: Screens and Navigation Matrix





Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html

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# Etruscan Sigla Project

[Browse](#) [Add Artifact](#) [Edit Artifact](#) [Create Collection](#) [Edit Collection](#) [Do something else](#)

Logout

Welcome, Admin

Artifact Name Search

[Advanced Search](#)

[<-previous](#)

## Entry View

[next->](#)

**Date Found**

**Location Found**

**Artifact Dating**

**Artifact Type**

**Sigla Location**

**Other Data**

Done

Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html

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# Etruscan Sigla Project

[\[Browse\]](#) [\[Add Artifact\]](#) [\[Edit Artifact\]](#) [\[Create Collection\]](#) [\[Edit Collection\]](#)  
[\[Do something else\]](#)

Logout  
Welcome, Admin

Artifact Name   
[Advanced Search](#)

## Create Entry

Entry Name:  Date Found:

Artifact Date:  Type of Artifact:

Location Found:  Dig Site:

Description:

Upload Images:  
Please specify a file:

[Main Page](#)

Done

Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html


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Etruscan Sigla Project [\[Browse\]](#) [\[Add Artifact\]](#) [\[Edit Artifact\]](#) [\[Create Collection\]](#) [\[Edit Collection\]](#) [\[Do something else\]](#) [Logout](#)

Welcome, Admin

[Advanced Search](#)

**Modify Entry**

  Remove Image

**Entry Name:**  **Date Found:**

**Artifact Date:**  **Type of Artifact:**

**Location Found:**  **Dig Site:**

**Description:**  
The Ancient Penguin was one of the Etruscans most revered gods. They painted it on many different items including pottery clothing and houses. This instance was painted on a cloth sheet and was probably used during religious ceremonies.

**Upload Images:**  
Please specify a file:

http://ww2.cs.fsu.edu/~marley/swe1/D8/modifyEntry.html



Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html

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**Etruscan Sigla Project** [\[Browse\]](#) [\[Add Artifact\]](#) [\[Edit Artifact\]](#) [\[Create Collection\]](#)  
[\[Edit Collection\]](#)  
[\[Do something else\]](#)

Logout

Welcome, Admin

Artifact Name

[Advanced Search](#)

## Create New Collection

Collection Name

Entry 1

Entry 2

Entry 3

Other Data

http://ww2.cs.fsu.edu/~marley/swe1/D8/createCollection.html

Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html

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# Etruscan Sigla Project

[\[Browse\]](#) [\[Add Artifact\]](#) [\[Edit Artifact\]](#) [\[Create Collection\]](#)  
[\[Edit Collection\]](#)  
[\[Do something else\]](#)

Logout

Welcome, Admin

Artifact Name  Search

[Advanced Search](#)

## Edit Collection

Collection Name

Entry 1   Remove Entry  
Entry 2   Remove Entry  
Entry 3   Remove Entry

Add Entry

http://ww2.cs.fsu.edu/~marley/swe1/D8/editcollection.html

Etruscan Sigla Project - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://ww2.cs.fsu.edu/~marley/swe1/D8/frames.html

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# Etruscan Sigla Project

[\[Browse\]](#) [\[Add Artifact\]](#) [\[Edit Artifact\]](#) [\[Create Collection\]](#)  
[\[Edit Collection\]](#)  
[\[Do something else\]](#)

Logout

Welcome, Admin

Artifact Name

[Advanced Search](#)

Artifact Name:

Dig Site:  Year found:

Type of Artifact:  Contributor:

http://ww2.cs.fsu.edu/~marley/swe1/D8/advanced.html

## Appendix D: Scenarios Analysis Table

### Scenario Analysis Tables

<b>Use Case Name</b>	Login
<b>Use Case ID</b>	1

#### Normal Scenario

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User enters name and password.		User Login Screen	
2	User selects the "Login" button.		User Login Screen	
3	System validates user information.			
4	Upon success, the user is granted access to unpublished files and appropriate privileges.			

<b>Use Case Name</b>	Search
<b>Use Case ID</b>	2

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User enters text in the form corresponding to the field they want to search on. That is, the word(s) are what they're searching for on the corresponding field.		Search Screen	
2	The user selects the field they want to search on from a selection given to them. They may search all fields for matches or a specific field.		Search Screen	
3	User selects the "Search" button.		Search Screen	
4	System queries the database for any entries that match or are similar to the search criteria			
5	System generates a web page of search results.		Search Results	

<b>Use Case Name</b>	Retrieve Citation
<b>Use Case ID</b>	3

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User <u>searches</u> for artifact(s).		Search Screen	
2	User selects an artifact web page from the search results.		Search Results	
3	User <u>views</u> web page.		View Entry	
4	User selects the "Generate Citation" button.		Retrieve Citation	
5	System gathers relevant artifact information and provides a formatted citation.		Retrieve Citation	

<b>Use Case Name</b>	Upload Additional Data
<b>Use Case ID</b>	4

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User logs into the system		Log In screen (User name, Password)	
2	User selects option to upload additional data to an entry		Option Screen (specifies how the user can interact with the system)	
3	User selects on which entry to upload additional data		Entry Selection Screen	
4	User adds new data to the entry		Entry Modification Screen	
5	User revises newly added data		Entry Modification Screen	
6	User saves additional data to entry	New data for specified entry	Entry Modification Screen, Entry Modification report screen (successful, failure)	
7	User signs out of the system		Log Out Screen	

<b>Use Case Name</b>	Create Entry
<b>Use Case ID</b>	5

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User logs into the system		Log In screen (User name, Password)	
2	User selects option to create new entry		Option Screen (shows options on how the user can interact with the system)	
3	User adds all data corresponding to the new entry		New Entry Screen	
4	User revises new entry		New Entry Screen	
5	User saves new entry	New entry with specified data	New Entry Screen, New entry added report screen (successful, failure)	
6	User logs out of the system		Log Out Screen	



<b>Use Case Name</b>	Publish Entry
<b>Use Case ID</b>	6

### Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	User logs into the system		Log In screen (User name, Password)	
2	User selects option to publish completed entry		Option Screen (shows options on how the user can interact with the system)	
3	User revises entry		Entry Modification Screen	
4	User publishes entry	Newly Published Entry	Publish Entry Screen, Publish Entry Result Screen (successful, failure)	
5	User signs out of the system		Log Out Screen	

<b>Use Case Name</b>	Modify Collection
<b>Use Case ID</b>	7

### Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	User logs into the system		Log In screen (User name, Password)	
2	User selects option to modify collection		Option Screen (shows options on how the user can interact with the system)	
3	User modifies collection		Collection Modification Screen	
4	User revises modifications to the collection		Collection Modification Screen,	
5	User saves modifications to the collection	Newly update collection	Collection Modification result screen (successful, failure)	
6	User logs out of the system		Log Out Screen	

<b>Use Case Name</b>	Modify Unpublished Entry
<b>Use Case ID</b>	8

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	Contributor logs in to the System.	Log in info	Log in	
2	Contributor selects which of his entries to modify.			
3	Contributor changes text, photos or drawings for the entry		Modify Artifact	
4	Contributor saves his changes.	Changes to an entry		
5	Changes are written to the database			
6	Contributor logs out of the system			

<b>Use Case Name</b>	Modify Published Entry
<b>Use Case ID</b>	9

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	System Administrator logs in to the System.	Log in info	Log in	
2	System Administrator finds the entry with an error			
3	System Administrator fixes the error.		Modify Artifact	
4	System Administrator saves the changes.	Changes to an entry		
5	Changes are written to the database			
6	System Administrator logs out of the system			

<b>Use Case Name</b>	Manage Contributor Accounts
<b>Use Case ID</b>	10

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	System Administrator logs in to the system.	Log in info	Log in	
2	System Administrator looks up the account request.	Contributor info		
3	System Administrator evaluates the requester.		Manage Contributors	
4	System Administrator decides if the request will be granted.			
5	If the request is granted the account is created, otherwise nothing happens.			
6	System Administrator notifies the requester of the decision.			
7	System Administrator logs out of the system.			

<b>Use Case Name</b>	Browse by Tree
<b>Use Case ID</b>	11

**Normal Scenario**

<b>Step #</b>	<b>Step Text</b>	<b>Data Stored</b>	<b>Screens Needed</b>	<b>Reports Needed</b>
1	User clicks on a link to go to another page.		View Artifact	
2	Step 1 is repeated until the User finds an entry they wish to view.			
3	Steps 1 and 2 are repeated until the User finds an entry they wish to view.		Modify Artifact	
4	The User leaves the website.			

Appendix E: Screens and Reports List

Screen/Report ID	Type	Screen/Report Name	Use Cases That Use this Screen/Report
SCR001	I/O	View Artifacts	Search, View Published Entries, Retrieve Citation
SCR002	I	Create Artifact	Create Entry, Login
SCR003	I	Modify Artifact	Modify Unpublished Entry, Login
SCR004	I	Manage Collection	Create Collection, Modify Collection
SCR005	I	Publish Artifact	Publish Entry, Login
SCR006	I	Upload Picture	Upload Additional Data, Login
SCR007	I	Manage Contributors	Manage Contributor Accounts , Login