

International Etruscan Sigla Project Software Requirements Specification

I. Introduction

A. Purpose

The purpose of this Software Requirements Specification document is to clearly define the system under development, that is, the International Etruscan Sigla Project (IESP). The intended audience of this document is the user including the staff of the project, researchers, and the general public. Other intended audience include the development team such as the requirements team, requirements analyst, design team, and other members of the developing organization.

B. Scope of the System Specified

The International Etruscan Sigla Project aims to assemble documentation on the thousands of examples of Etruscan nonverbal writing; therefore, the IESP system will provide online functionality for general users, researchers, and staff members. General users may search the collection, view artifacts, view news, view help documentation, and register as researchers. Researchers have all the functionality of general users and may also comment on artifacts, manage their artifacts, manage their accounts, and manage their personal collections. Staff members have all the functionality of researchers and may also delete comments, update the news section, create siglum tags, and manage users.

As the system being designed for the IESP is web-based, the information it maintains can be updated from a worldwide community of historical and archaeological researchers which will enhance the research by providing a comparative study on Etruscan writing. In addition, this system will be accessible to all interested members of the general public who have access to the Internet and would promote new interests in the anthropological sciences.

C. Definitions, Acronyms, and Abbreviations

General User	All members of the general public.
Researcher	Any member of the general public who has registered and been verified as a researcher by a staff member.
Staff	A person with administrative power in the IESP.
Functional requirement	A service provided by the software system.
Non-functional requirement	A constraint on the system or how the system is developed.
SRS	Software Requirements Specification document
IESP	International Etruscan Sigla Project
Siglum	Etruscan nonverbal writing (singular)
Sigla	Etruscan nonverbal writing (plural)
Tag	Description of sigla found on an artifact. An artifact may have zero or more tags.
GIF	Graphics Interchange Format
HTML	Hypertext Markup Language
JPEG	Joint Photographic Experts Group
SQL	Structured Query Language

D. References to Supporting Documents

Actor, Attribute, Class, and Use Case descriptions – provided in Appendix A

Use Case Point Analysis – provided in Appendix B

Screen and Report Outputs List – provided in Appendix E

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

A. Product Perspective

The IESP is a web-based system. The system requires a Database Management interact with the system through any modern Web browser (i.e.: Firefox, Internet Explorer, Safari).

The main purposes of the system are to allow for cataloguing of research on Etruscan sigla to enable researchers to share each other's work, and also to allow for grouping of similar sigla to increase productivity of researchers who conventionally analyze and sort sigla manually.

The project will be staffed with researchers in the field and some technical staff to maintain the system and provide support to researchers.

Florida State University is the only institution currently involved, but others have also shown interest in future involvement.

B. Product Functions

Users can access the system through any modern Web browser. Upon reaching the site, users can browse the database of Etruscan sigla. Similar sigla are organized by recognizing similar attributes (i.e.: sigla category, type of artifact, location found). Users will also be allowed to search for sigla based on these attributes.

If a user is a researcher in the field of Etruscan sigla, the user can register to have an account created in the system. The user can register through the Web site; however, the user's credentials must be validated by a staff member of the IESP before the account will be

active. Upon registration, the user enters personal information, such as his or her name, research institution, and e-mail address. The details of the validation policies will be decided later at a later date.

Once a user has an active account, the user can login to the Web site with the username and password supplied upon registration. IESP staff members will also be able to login in the same manner.

Once logged in, validated users (researchers and staff members with active accounts) can add comments to sigla. Researchers can also edit or delete their own comments, while staff members can edit or delete comments made by any user.

Validated users can also upload new sigla to the Web site, specifying attributes that describe the sigla and images of it. A validated user who has uploaded a sigla can modify the attributes if the sigla.

Staff members can add new sigla categories to the site.

All aspects of the system are easy enough to use for non-technical people with moderate experience using a Web browser. Users can specify a language to allow for translation of certain search keywords. The scope of the multilingual features will be decided on later.

The technical staff will make the system robust. Backup policies of data will be implemented and data corruption will be prevented by proper database design.

C. User Characteristics

The three main groups of users are the general public, validated researchers, and IESP staff members.

The general public can search and browse the collection of sigla. The general public do not log into the Web site. These users are assumed to have very little technical training. Their educational background and location is unknown.

Validated researchers are those who have registered and whose credentials have been validated by IESP staff members. Researchers are also assumed to have little technical training. Their education is assumed to be on the college-level, anywhere between undergraduate

and post-doctoral. Researchers will be able to log into the Web site after validation.

IESP staff members are divided into two groups – IESP researchers and IESP technical staff. IESP researchers are assumed to have the same level of training as validated researchers, while IESP technical staff members are assumed to have much more technical knowledge.

D. General Constraints

The system provides web access for all user functions, with the exception that IESP technical staff may have to access certain parts of the system through other means for hardware or software maintenance.

The user interface will be intuitive enough for the untrained public to navigate.

The system will be robust to allow for persistence storage of researcher information and sigla data. The system will be reliable enough to allow for use by the general public and researchers at their convenience.

E. Assumptions

The system is assumed to run on free open-source configuration – possibly a LAMP (Linux-Apache-MySQL-PHP/PERL) configuration.

III. Functional Requirements

3.1. The system shall use a Home page which shall be the entry point for all users. The home page shall be aesthetic and simple to navigate.

3.2. The system shall allow users to login and validate themselves as researchers or staff members.

3.2.1. The system shall allow users to register themselves as researchers.

3.2.2. The system shall validate the registering user email by emailing them a randomly generated password.

3.2.3. The system shall allow users to change their password.

3.2.4 The system shall allow users to request their password. The password shall be sent to the email entered during registration.

3.3. The system shall allow researchers to upload artifacts to the database.

3.3.1 The system shall allow staff members to delete an artifact as long as the artifact has not been published.

3.3.2 The system shall allow the owner of the artifact to edit its attributes as long as the artifact has not been published.

3.3.3 The system shall allow the owner of the artifact to delete the artifact as long as the artifact has not been published.

3.3.4 The system shall allow the owner of the artifact to publish the artifact. A published artifact will guarantee the general public that the artifact will no longer be edited or subject to deletion.

3.4 The system shall allow researchers to post comments on any uploaded artifact.

3.4.1 The system shall allow the owner of a comment to edit the comment's content. Upon editing, a copy of the comment shall be created while the original version shall be archived.

3.4.2 The system shall allow users to report inappropriate comments to the staff.

3.4.3 The system shall allow staff members to disable any comment. Upon disabling, the comment is removed from the Artifact's page. The original comment shall still be accessible through the archives.

3.5 The system shall allow the user to search the artifacts in the collection by specifying keywords, by specifying tags, or by entering artifact attributes in an advanced search form.

3.5.1 The system shall display the search results in a orderly manner. The search result page shall contain all the Artifacts matching the searching criteria, represented by a small thumbnail of the Artifact image. There shall also be a minimal description of each Artifact to allow Users to recognize an Artifact without the need of accessing the Artifact's detail page.

3.5.2 The system shall allow users who are not familiar with the terminology, to browse through the Artifacts without needing to specify any search criteria.

3.6 The system shall allow the user to view the artifacts in the collection.

3.6.1 The system shall display the artifacts information and images, in an ordered and complete fashion.

3.6.2 The system shall display the location where the Artifact was found in a rendered sky-view map.

3.6.3 The system shall display other Artifacts that were found near the location of the viewed Artifact.

3.7 The system shall allow researchers to post information about themselves on their profile.

3.7.1 The system shall allow researchers to edit their personal information.

3.7.2 The system shall allow users to view researchers' profiles.

3.8 The system shall allow staff members to create new Sigla tags.

3.9 The system shall allow staff members to manage Users accounts.

3.9.1 The system shall allow staff members to verify registering users.

3.9.2 The system shall allow staff members to edit researchers' profiles

3.9.3 The system shall allow staff members to revoke users privileges.

3.10 The system shall allow staff members to publish news articles.

3.10.1 The system shall allow users to view published news articles.

3.11 The system shall allow researchers to create a personal collection of artifacts.

3.11.1 The system shall allow a researcher to add or remove artifacts from the researcher's personal collection.

3.12 The system shall provide a help feature that shall explain to Users how to Navigate the site, along with documentation on other functionalities of the site.

3.13 The system shall provide an about page. This page shall display the system's purpose, history and contact information.

IV. Non-functional Requirements

4.1 The system shall be compatible with the major web browsers (Internet Explorer, Firefox, Opera, Chrome, Safari.)

4.2 The system shall backup its data to prevent information loss as a result of system failures.

4.3 The system shall be flexible enough to allow modifications of Artifact tags without corrupting existing Artifacts in the database.

4.4 The system shall be simple enough to be used without specialized training other than the knowledge of using a web browser.

4.5 The system shall be internationalized in the sense that users may specify a language upon registration. Certain keywords in the website shall be translated to the chosen language.

4.5.1 The default language shall be a universal language since the System will be used worldwide.

4.6 The system shall use a consistent style format across the web-site.

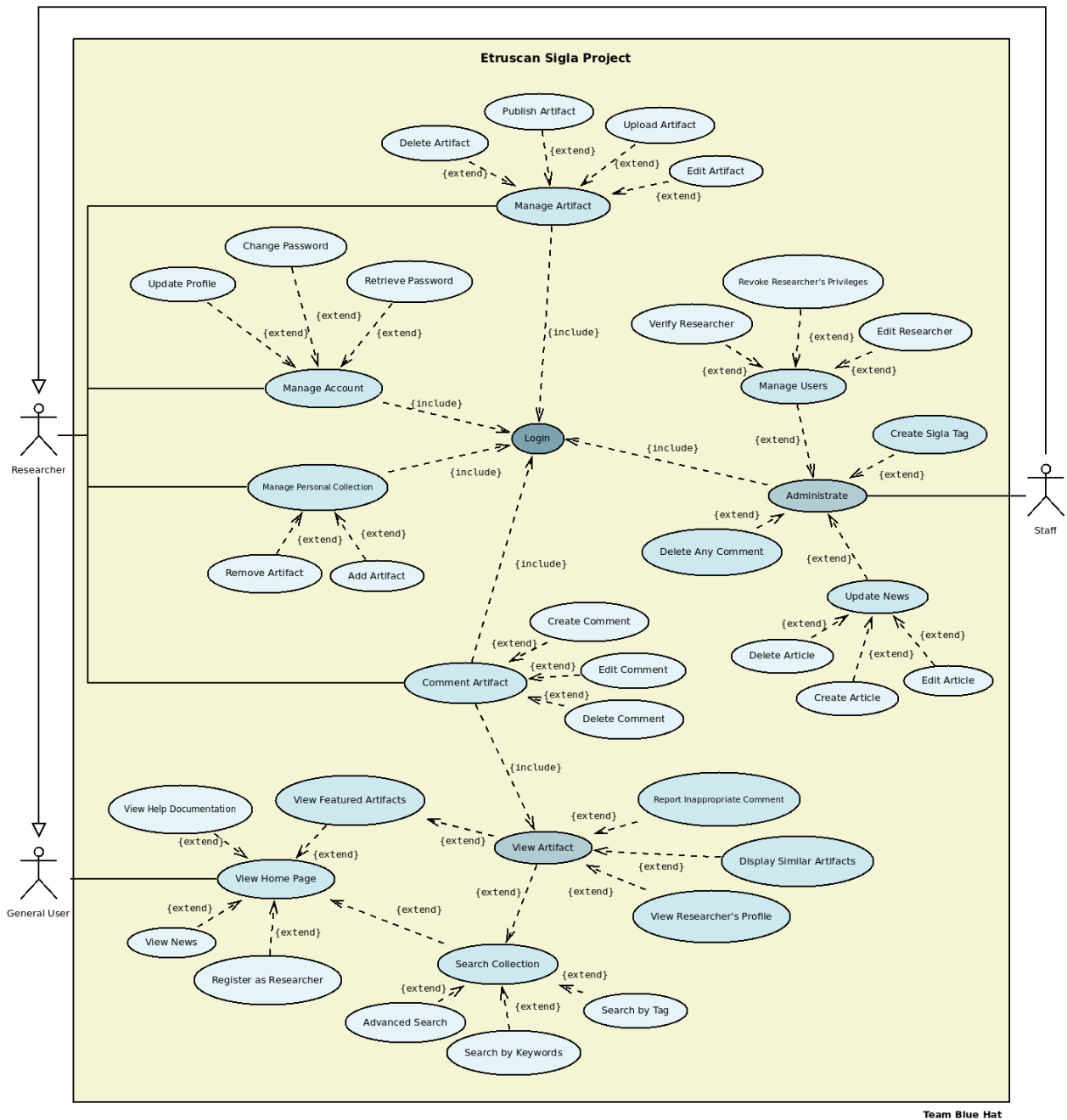
4.7 The system shall use a standard image format that keeps file size to a minimum while prioritizing the quality of the image.

4.8 The system shall use an universal measurement system.

4.9 The system shall be build using Open Source alternatives. It shall not be required to purchase any software, tool or component licenses.

4.10 The system shall support Unicode character encoding with the purpose of allowing most languages to be represented.

V. Class Diagram



Actor Description

Name	Researcher
Alternate Names	Scholar

Input Data

Name of Use Case	Inputs to the System
Comment Artifact	Comment
Manage Artifact	None. This is an expandable section that includes 3 subsections (Edit Artifact, Delete Artifact, Upload Artifact).
Update Profile	First Name, Last Name, Organization, Language, Password

Output Data

Name of Use Case	Outputs from the System
Comment Artifact	All comments for the selected artifact.
Manage Artifact	None
Update Profile	All profile attribute fields and their value.

Description

<p>A researcher is a general user who has successfully completed the researcher registration process.</p>

Comments

Researchers have a Username and may create their own password. They must use these to access the researcher use cases. A researchers Username is immutable, while all other attributes may be changed.

Name	General User
Alternate Names	General Public

Input Data

Name of Use Case	Inputs to the System
View Collection	A search request (either by attribute, or tag).
Report Inappropriate Comment	Comment_ID
Register as Researcher	Username, Password, First Name, Last Name, Location, Organization, Language

Output Data

Name of Use Case	Outputs from the System
View Collection	All artifacts relevant to the search request.
Report Inappropriate Comment	Verification message.
Register as Researcher	Registration form.

Description

Everyone is a general user. General users do not have to register or login to access general user use cases. They may view the collection and artifact comments but cannot make comments of their own or upload new sigla.

Comments

A general user may become a researcher if they successfully complete the researcher registration process.

Name	Staff
Alternate Names	

Input Data

Name of Use Case	Inputs to the System
Administrate	None. This is an expandable section that includes 4 subsections (Manage Users, Update News, Delete Any Comment, Create Sigla Tag).

Output Data

Name of Use Case	Outputs from the System
Administrate	None

Description

Staff members are individuals who work on the IESP, as verified by Dr Nancy de Grummond. A staff member is also a researcher. Staff members have a username and password, and must login to access the staff use cases.

Comments

Attribute Description

Name	UserName
Class Name	Login
Alternate Name(s)	None
Type	String
Length	Specify by user
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Login
Derivation Formula	None
Description	The user can supply his name as part of the login process
Comments	created by user during the registration process

Name	Password
Class Name	Login
Alternate Name(s)	None
Type	String
Length	Specify by user
Output Format	"XXXXXXX..." where X is an string

Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Login
Derivation Formula	None
Description	The user can supply his password as part of the login process
Comments	created by user during the registration process

Name	FristName
Class Name	Researcher
Alternate Name(s)	None
Type	String
Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Researcher
Derivation Formula	None
Description	Researcher supplies his Firstname.
Comments	None

Name	LastName
Class Name	Researcher
Alternate Name(s)	None
Type	String
Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Researcher
Derivation Formula	None
Description	Researcher supplies his LastName.
Comments	None

Name	Organization
Class Name	Researcher
Alternate Name(s)	None
Type	String
Length	Specify by reserarcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank

Acceptable Values	“XXXXXXX...” where X is an string or blank
Source (where value comes from)	Researcher
Derivation Formula	None
Description	Researcher supply the information of organization that he belongs to.
Comments	None

Name	Categories
Class Name	Categories
Alternate Name(s)	None
Type	String
Length	Specify by staff
Output Format	“XXXXXXX...” where X is an string
Default Value	General category
Acceptable Values	“XXXXXXX...” where X is an string
Source (where value comes from)	Sigla Database
Derivation Formula	None
Description	Staff groups siglas into different categories.
Comments	Siglas are first in general category until staff group them into specified categories

Name	SiglaArray
Class Name	Collection
Alternate Name(s)	None
Type	Sigla
Length	Specify by staff
Output Format	Array format
Default Value	Blank
Acceptable Values	Data in Array format
Source (where value comes from)	Collection
Derivation Formula	None
Description	SiglaArray contain data of different Siglas in sigla data type
Comments	None

Name	Name
Class Name	Sigla
Alternate Name(s)	None
Type	String

Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Sigla
Derivation Formula	None
Description	This attribute contain the name of sigla
Comments	None

Name	Location
Class Name	Sigla
Alternate Name(s)	Excavation
Type	String
Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string or blank
Source (where value comes from)	Sigla

Derivation Formula	None
Description	This attribute contain the excavation of sigla
Comments	None

Name	SiglaCategory
Class Name	Sigla
Alternate Name(s)	None
Type	String
Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank
Acceptable Values	"XXXXXXX..." where X is an string
Source (where value comes from)	Sigla
Derivation Formula	None
Description	This attribute contain the category the sigla belong to
Comments	None

Name	DateFound
Class Name	Sigla
Alternate Name(s)	None
Type	Int
Length	10
Output Format	NN/NN/NNNN where N is an integer
Default Value	Blank
Acceptable Values	NN/NN/NNNN where N is an integer or blank
Source (where value comes from)	Sigla
Derivation Formula	None
Description	This attribute contain the date when the Sigla is excavated
Comments	None

Name	AddComment
Class Name	Sigla
Alternate Name(s)	None
Type	Comment
Length	Specify by researcher
Output Format	"XXXXXXX..." where X is an string
Default Value	Blank

Acceptable Values	“XXXXXXX...” where X is an string or blank
Source (where value comes from)	Sigla
Derivation Formula	None
Description	Researcher add comment to the specified sigla as part of the create sigla process

Name	Comment
Class Name	CommentSigla
Alternate Name(s)	None
Type	String
Length	Specify by researcher
Output Format	“XXXXXXX...” where X is an string
Default Value	Blank
Acceptable Values	“XXXXXXX...” where X is an string or blank
Source (where value comes from)	CommentSigla
Derivation Formula	None
Description	Researcher add the comment to the specified sigla
Comments	None

Class Description

Name	Login
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Description	An instance of login class is a user that has login to the system.
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Attributes

Name of Attribute	Data Type	Description
UserName	String	User name is a unique identification for user to login the system
Password	String	Supplied by user.

Methods

Method Signature	Description
Login	This public method is a user login to the system
Register	This public method is a user register as a new member

Relationships

Class Name	Type of Relationship	Comments
General User	Association	The login class contain the login information of user

Name	GeneralUser
Description	An instance of GeneralUser class defines attributes and methods associate with general user.

Attributes

Name of Attribute	Data Type	Description

Methods

Method Signature	Description

Relationships

Class Name	Type of Relationship	Comments
Researcher	Generalization	Researcher is a kind of user
Login	Association	The login class contain the login information of user
Collection	Association	General user can search

		the collection

Name	Researcher
Description	An instance of Researcher class defines attributes and methods associate with researcher.

Attributes

Name of Attribute	Data Type	Description
FirstName	String	
LastName	String	
Organization	String	This attribute define the organization which the researcher belong to

Methods

Method Signature	Description
EditInfo	This public method is Researcher can modify the content of their information

Relationships

Class Name	Type of Relationship	Comments
General User	Generalization	
CommentSigla	Association	
Staff	Generalization	
Sigla	Association	

Name	Staff
Description	An instance of User staff class defines attributes and methods associate with staff.

Attributes

Name of Attribute	Data Type	Description

Methods

Method Signature	Description

Relationships

Class Name	Type of Relationship	Comments
Researcher	Generalization	
Sigla Database	Association	Staff can create new sigla category and group the similar siglas.

Name	Sigla Database
Description	An instance of Sigla Database class define a database have different categories of Sigla

Attributes

Name of Attribute	Data Type	Description

Methods

Method Signature	Description
GroupSimilarSiglas	
CreateSiglaCategory	This public method is staff can create sigla category

Relationships

Class Name	Type of Relationship	Comments
Collection	Association	Sigla collection is organized by sigla database.
Catagories	Aggregation	Categories is part of Sigla Database
staff	Association	Staff can create new sigla category and group the similar siglas.

Name	Categories
Description	An instance of Categories class define a categories information of Sigla Database

Attributes

Name of Attribute	Data Type	Description
Categories	String	Every sigla belong to specified category.

Methods

Method Signature	Description

Relationships

Class Name	Type of Relationship	Comments
Sigla Database	Aggregation	Categories is part of Sigla Database

Name	Collection
Description	An instance of collection class is user search collection

Attributes

Name of Attribute	Data Type	Description
SiglaArray	Sigla	This array contain the collection of sigla

Methods

Method Signature	Description
ReportInappropriateComment	
Search	This public method is user use the method to search specified sigla
NewSigla	This public method is Researcher can create new sigla.

Relationships

Class Name	Type of Relationship	Comments
Siala database	Association	
Sigla	Aggregation	
GeneralUser	Association	

Name	Sigla
Description	An instance of collection class define attributes and methods associate with sigla

Attributes

Name of Attribute	Data Type	Description
Name	String	The Name of sigla
Location	String	Location of excavation

DateFound	int	
SiglaCatagory	String	
AddComment	Comment	

Methods

Method Signature	Description
EditSigla	This public method is Researcher can edit new sigla.
DeleteSigla	This public method is Researcher can delete new sigla.

Relationships

Class Name	Type of Relationship	Comments
Collection	Aggregation	Sigla class is a part of collection class
Researcher	Association	Researcher is the only authorized user can build a new sigla
CommentSigla	Association	

Name	CommentSigla
Description	An instance of CommentSigla class

Attributes

Name of Attribute	Data Type	Description
Comment	String	Supply by researcher

Methods

Method Signature	Description
EditComment	Researcher can modify comment
DeleteComment	Staff can delete comment

Relationships

Class Name	Type of Relationship	Comments
Researcher	Association	
Sigla	Association	

Use Case Descriptions

Name	Upload Artifact
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ID	SCR-001
Requirement Number	3.2
Description	This use case allows a researcher to upload an artifact.
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher has an account.
Post-condition	Researcher has uploaded an artifact. Artifact has been added to the collection.
Trigger	Researcher selects the 'Upload Artifact' option.

Normal Scenario

1.	Researcher <u>Login</u> to the system.
2.	Researcher selects <u>Manage Artifacts</u> .
3.	Researcher selects <u>Upload Artifact</u> .
4.	Researcher views 'Upload Artifact' form.
5.	Researcher completes 'Upload Artifact' form.
6.	System validates 'Upload Artifact' form is completed.
7.	Artifact is added to IESP collection.

Extensions

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Name	Update News
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ID	SCR-007
Requirement Number	3.7
Description	This use case allows a staff member to publish news articles.
Primary Actor	Staff
Secondary Actor(s)	
Pre-condition	Staff member has an account.
Post-condition	Staff member has published a news article. 'News & Updates' section of website is modified.
Trigger	Staff member selects the 'Upload News' option.

Normal Scenario

1.	Staff member <u>Login</u> to the system.
2.	Staff member selects <u>Upload News</u> .
3.	Staff member views 'Upload News' form.
4.	Staff member completes 'Upload News' form.
5.	System validates 'Upload News' form is completed.
6.	System uploads news.

Extensions

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Name	Create Comment
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ID	SCR-002
Requirement Number	2.1
Description	This use case allows a researcher to create a comment
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher as an account
Post-condition	The site is updated
Trigger	The researcher clicks the create comment option on the webpage

Normal Scenario

1.	Researcher views an Artifact
2.	Researcher clicks on a create comment link.
3.	Researcher Logins into the system.
4.	System Validates Researcher
5.	Researcher types in the comment
6.	Researcher clicks submit to the typed in comment
7.	System places the comment onto the artifact page

Extensions

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Name	Edit Comment
ID	SCR-002

Requirement Number	2.2
Description	This use case allows a researcher to edit a comment
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher as an account
Post-condition	The site is updated
Trigger	The researcher clicks the edit comment option on the webpage

Normal Scenario

1.	Researcher views an Artifact
2.	Researcher clicks on an edit comment link.
3.	Researcher Login's to the system.
4	System Validates Researcher
5.	Researcher edit's the comment
6.	Researcher clicks submit to the typed in comment
7.	System places the edited comment onto the artifact page

Extensions

2.1	Comment field already contains data: 1.1) Researcher then edits the data in the field.
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Name	Delete Comment
ID	SCR-002
Requirement Number	2.3

Description	This use case allows a researcher to delete a comment
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher as an account
Post-condition	The site is updated
Trigger	The researcher clicks the delete comment option on the webpage

Normal Scenario

1.	Researcher views an Artifact
2.	Researcher clicks on a delete comment link.
3.	Researcher Login into the system.
4	System Validates Researcher
5.	System deletes comment

Extensions

2.1	Comment field already contains data: 1.1) Researcher then deletes the data in the field.
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Name	Report Inappropriate Comment
ID	SCR-002
Requirement Number	2.4
Description	This use case allows any individual to report an inappropriate comment
Primary Actor	User

Secondary Actor(s)	
Pre-condition	N/A
Post-condition	N/A
Trigger	A user clicks on the report inappropriate comment

Normal Scenario

1.	A user views an artifact
2.	A user views the comments
3.	A user views an inappropriate comment
4.	A user clicks the report inappropriate comment
5.	The staff are notified

Extensions

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Name	Delete Artifact
ID	SCR-002
Requirement Number	2.5
Description	This use case allows any individual to report an inappropriate comment
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher has an account
Post-condition	Researcher has an artifact to delete
Trigger	The Researcher clicks the delete artifact link

Normal Scenario

1.	Researcher views Artifact
2.	Researcher Logins into the system
3.	Researcher clicks the Delete Artifact button
4.	The system deletes the artifact from the database

Extensions

3.1	Artifact already contains data:
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Name	Create Sigla Tag
ID	SCR-006
Requirement Number	6.1
Description	This use case allows a staff to create a sigla tag
Primary Actor	Staff
Secondary Actor(s)	
Pre-condition	Staff has an account
Post-condition	N/A
Trigger	Staff creates a tag

Normal Scenario

1.	Staff <u>Login</u> to the system.
2	System Validates Researcher

3.	Staff enters the Administrate option
4.	Staff selects <u>Create Sigla Tag</u> .
5.	Staff writes a new Sigla tag.
6.	The system creates a new Sigla tag

Extensions

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Name	Login
ID	3
Requirement Number	3.1.1
Description	This use case defines how a researcher login to the system
Primary Actor	Researcher
Secondary Actor(s)	Staff
Pre-condition	Researcher has an active account
Post-condition	Researcher has privilege to comment artifact Researcher has privilege to update profile Researcher has privilege to manage artifact
Trigger	Researcher click "login" button

Normal Scenario

1.	Researcher type the address of the website
2.	Researcher go to the login page

3.	Researcher provide his user name and password
4.	Researcher click “login” button

Extensions

3.1	Researcher provide wrong name or password

Name	Update Profile
ID	10
Requirement Number	3.1
Description	This use case defines researcher update his/her profile
Primary Actor	Researcher
Secondary Actor(s)	Staff
Pre-condition	Researcher had successfully login or registered
Post-condition	The information on researcher’s profile have changed
Trigger	Researcher chose “Update Profile” option

Normal Scenario

1.	Researcher login or register himself.
2.	Researcher chose “Update Profile” option

3.	Researcher fill the information
4.	Researcher submit his information to system
5	System verify his information
6	Change has applied.

Extensions

5.1	Some information the researcher provide has error, thus the system ask the researcher to re-submit the update form.
6.1	Some information the researcher provide are blank, thus the system ask the researcher to re-submit the update form.

Name	Verify Researcher
ID	11
Requirement Number	3.6
Description	This use case defines staff verify Researcher
Primary Actor	Staff
Secondary Actor(s)	Researcher
Pre-condition	Staff chose "manage users" option
Post-condition	Staff have verified whether the user is valid user or not
Trigger	Staff chose "verify Researcher" option

Normal Scenario

1.	Staff login himself
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2.	Staff chose "manage users" option
3.	Staff chose "verify Researcher" option
4.	Staff verify the information that the researcher provide to database
5	Staff have verified whether the user is valid user or not

Extensions

5.1	Staff chose "delete Researcher", if the researcher do not pass his verification.

Name	Edit Researcher
ID	12
Requirement Number	3.6
Description	This use case defines staff edit Researcher
Primary Actor	Staff
Secondary Actor(s)	Researcher
Pre-condition	Staff chose "manage users" option
Post-condition	Staff have successfully change parts of Researcher information
Trigger	Staff chose "edit Researcher" option

Normal Scenario

1.	Staff login himself
2.	Staff chose "manage users" option
3.	Staff chose "Edit Researcher" option
4.	Staff edits the researcher's information.

Extensions

--	--

Name	Delete Researcher
ID	13
Requirement Number	3.6
Description	This use case defines staff delete Researcher
Primary Actor	Staff
Secondary Actor(s)	Researcher
Pre-condition	Staff chose "manage users" option
Post-condition	Staff have successfully delete researcher
Trigger	Staff chose "delete Researcher" option

Normal Scenario

1.	Staff login himself
2.	Staff chose "manage users" option
3.	Staff chose "delete Researcher" option
4.	Staff clicks "delete researcher button.
5	The deletion have applied.

Extensions

Name	Edit Artifact
ID	5
Requirement Number	3.2.2
Description	This use case defines how researchers may modify an Artifact attributes.
Primary Actor	Researcher
Secondary Actor(s)	
Pre-condition	Researcher is logged in.
Post-condition	Artifact attributes are updated. A confirmation message is displayed.
Trigger	Researcher selects the 'Edit' button.

Normal Scenario

1.	Researcher fills desired attribute fields.
2.	Researcher selects the 'Submit' button.
3.	System validates input data.
4.	System displays a confirmation message.

Extensions

1.1	Attribute field already contains data: 1.1) Researcher first deletes the data in the field.
3.1	Invalid data is input: 3.1) System displays an error message. 3.2) Flow returns to point (1) of the scenario.

Name	Search by Attribute
ID	6
Requirement Number	3.4.1
Description	This use case defines how users will be able to browse Artifacts based on an attribute-based criterion.
Primary Actor	General User
Secondary Actor(s)	
Pre-condition	None
Post-condition	Matching Artifacts are displayed to the User.
Trigger	User selects the 'Search' button.

Normal Scenario

1.	User fills desired attribute fields.
2.	User selects the 'Submit' button.
3.	System displays search results.

Extensions

3.1	No results are found: 3.1) System displays an error message.
Name	Search by Tag
ID	7
Requirement Number	3.4.1
Description	This use case defines how users will be able to browse Artifacts based on a tag-based criterion.
Primary Actor	General User
Secondary Actor(s)	
Pre-condition	User is viewing the Tag Cloud (located in the Home Page and on Artifacts pages)
Post-condition	Matching Artifacts are displayed to the User.
Trigger	User selects any of the tags displayed in the Tag Cloud he is currently viewing.

Normal Scenario

3.	System displays search results.
-----------	---------------------------------

Extensions

3.1	No results are found. This occurs when the selected tag is unique to the viewed Artifact. 3.1) System displays an error message.
------------	---

Name	Administrate
ID	SCR-012
Requirement Number	3.6, 3.7

Description	This is the portal for administration tasks.
Primary Actor	Staff
Secondary Actor(s)	n/a
Pre-condition	A user is logged in and verified as a Staff user.
Post-condition	n/a
Trigger	Either a staff member logs in and is immediately brought to this page, or a staff member is already logged in and clicks a link to be brought to the page.

Normal Scenario

1.	The authenticated Staff user arrives at the Administration Root page.
2.	The user clicks on an Administration Task link.

Extensions

2.1.	Perform Manager Users use case.
2.2	Perform Update News use case.
2.3	Perform Create Siglum Tag use case.

Name	Register as Researcher
ID	SCR-004
Requirement Number	3.1.1
Description	This allows a general user to apply for a researcher account on the site.
Primary Actor	General User
Secondary Actor(s)	

Pre-condition	A user is not currently logged in on the site.
Post-condition	The user has a new pending account in the database upon successful submission.
Trigger	The user clicks the link to register for a new account.

Normal Scenario

1.	General User arrives at the Registration page.
2.	General User enters Researcher Information.
2.1	General User enters first name into corresponding text box.
2.2	General User enters last name into corresponding text box.
2.3	General User enters organization name into corresponding text box.
2.4	General User enters e-mail address into corresponding text box.
2.5	General User picks language from drop-down list box.
2.6	General User enters desired username into corresponding text box.
2.7	General User enters desired password into corresponding text box with input hidden.
2.8	General User repeats desired password into corresponding text box with input hidden.
3.	General User hits submit button.
4.	System validates Researcher Information.
5.	System directs user to Display Registration Confirmation page.

Extensions

4.1	If Researcher Information is invalid
4.1.1	Registration page is reloaded with Researcher Information fields (other than password) populated with the values that were input.
4.1.2	System flags invalid values.

4.1.3	General User fixes invalid values.
4.1.4	Return to step 3.

Appendix B

RAW Use Case Point Analysis

Actor Points

Actor Name	Actor Type	Actor Points
Staff	Complex	3
Researcher	Complex	3
General User	Complex	3
	TOTAL	9

Use Case Points

Use Case Name	Number of Transactions	Use Case Type	Use Case Points
Manage Artifact	4	Average	10
Manage Account	3	Simple	5

Manage Personal Collection	2	Simple	5
Manage Users	3	Simple	5
Update News	3	Simple	5
Create Sigla Tag	1	Simple	5
Delete Any Comment	1	Simple	5
Comment Artifact	3	Simple	5
View Artifact	5	Average	10
View Home Page	4	Average	10
Search Collection	3	Simple	5
		Total Points:	70

Etruscan Sigla Project
ADJUSTED Use Case Point Analysis

TECHNICAL COMPLEXITY FACTORS

Technical Factor Number	Description	Weight	Assigned Value	Weighted Value	Notes
T1	Distributed system	2.0	0	0	One machine.
T2	Response time, throughput or performance objectives	1.0	2	2	Can't leave user hanging for too long.
T3	End User online efficiency	1.0	1	1	User doesn't need to be efficient.
T4	Complex internal processing	1.0	3	3	Database operations to find similar siglas.
T5	Reusability of Code	1.0	2	2	Just enough to be expandable.
T6	Easy to install	0.5	0	0	Will only be installed once.
T7	Ease of use	0.5	5	2.5	Should be extremely easy.
T8	Portability	2.0	0	0	Only installing it in one machine.
T9	Ease of Change	1.0	4	4	Needs to be expandable.
T10	Concurrency	1.0	5	5	Needs to process many queries.
T11	Special security objectives	1.0	1	1	Just basic User login security.
T12	Direct access for third parties	1.0	0	0	Will not require a third-party.

T13	Special user training required	1.0	2	2	Administrators need training.
			TFactor	22.5	
			Technical Complexity Factor (TCF)	0.83	

ENVIRONMENTAL FACTORS

Environmental Factor Number	Description	Weight	Assigned Value	Weighted Value	Notes
E1	Familiarity with system development process being used	1.5	N/A		Cannot produce value at this state.
E2	Application experience	0.5	N/A		
E3	Object-Oriented experience	1.0	N/A		
E4	Lead analyst capability	0.5	N/A		
E5	Motivation	1.0	N/A		
E6	Requirements Stability	2.0	N/A		
E7	Part time staff	-1.0	N/A		
E8	Difficulty of the programming language	-1.0	N/A		
			EFactor	N/A	
	$1.4 + 0.03 * \text{EFactor}$		Environmental Factor (EF)	0.635	Using the book's results to produce a default total.

SUMMARY – Estimated Work

Factor	Value
Total Actor Points (Raw)	9
Total Use Case Points (Raw)	70
Total Unadjusted Use Case plus Actor Points	79
Technical Complexity Factor	0.83
Environmental Complexity Factor	0.64
Adjusted Use Case Points (Total Unadjusted Use Case plus Actor Points * Technical Complexity Factor * Environmental Complexity Factor)	41.39
Hours per Adjusted Use Case Points (constant)	20
TOTAL Estimation of Work in hours (Adjusted Use Case Points * Hours per Adjusted Use Case Points)	827.72

Appendix E**Screen and Report Outputs List**

Screen/Report ID	Type (I, O, I/O)	Screen/Report Name	Use Cases that Use this Screen/Report
C.	I	Researchers: Upload Artifact Form	Upload Artifact
D.	O	Display Artifact Upload Success/Failure Message	Upload Artifact
E.	I/O	View Artifact: Attributes & Comments	Create Comment Edit Comment Delete Comment Report Inappropriate

			Comment Delete Artifact Publish Artifact Add Artifact (to Collection)
F.	I	Researcher: Login Form	Login
G.	I	General User: Registration Form	Register as Researcher
H.	O	Display Registration Confirmation	Register as Researcher
I.	I/O	Edit Artifact: Attributes	Edit Artifact
J.	I/O	Administration: Create a new Artifact Tag	Create Artifact Tag
K.	I/O	Administration: Update Home Page News	Update News
L.	I	View Artifact: Search Form	Advanced Search
M.	O	View Artifact: Search Results	Advanced Search Search by Attribute Search by Tag
N.	I/O	Researcher: Update Profile Form	Update Profile Change Password
O.	I/O	Administration: Manage Users	Verify Researcher Edit Researcher Revoke Researcher Privileges
P.	O	Administration: Home Page	Update News Manage Users Create Siglum Tag
Q.	O	General User: Home Page	View Collection View News View Help Documentation Search by Tag

			Search by Keywords Login Register as Researcher
R.	O	Edit Artifact: Success/Failure Message	Edit Artifact
S.	O	Researcher: Manage Account	Update Profile Change Password Retrieve Password
T.	I/O	Researcher: Retrieve Password Screen	Retrieve Password
U.	O	Researcher: Retrieve Password Confirmation Screen	Retrieve Password
V.	O	Researcher: Manage Personal Collection	Remove Artifact (from Collection)
W.	O	General User: Help Pages	View Help Documentation
X.	I/O	Administration: Revoke Researcher Privileges Confirmation	Revoke Researcher Privileges
Y.	I/O	View Artifact: Create Comment	Create Comment
Z.	I/O	View Artifact: Edit Comment	Edit Comment
AA.	O	View Artifact: Report Inappropriate Comment	Report Inappropriate Comment
BB.	O	View Artifact: Delete Artifact	Delete Artifact
CC.	O	View Artifact: Delete Artifact confirmation	Delete Artifact
SCR-28	O	View Artifact: Publish Artifact confirmation	Publish Artifact
SCR-29	I/O	View Artifact: Publish Artifact	Publish Artifact
SCR-30	O	Researcher: confirmation message	Verify Researcher Edit Researcher
SCR-31	O	View Artifact: Delete Comment	Delete Comment

SCR-32	I/O	Administration: Edit Researcher	Edit Researcher
SCR-33	O	Researcher: Manage Artifact	Delete Artifact Publish Artifact Upload Artifact Edit Artifact
SCR-34	O	Researcher: Home Page	Manage Account Manage Collection Manage Artifact
SCR-35	O	Researcher: Update Profile Confirmation Message	Update Profile
SCR-36	O	Administration: Verify Researcher	Verify Researcher

Other Documents

Functional Test Cases

Use Case Name: Create Comment

Developer Name: Adil Arif

Use Case Number: 2.1

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	Researcher clicks on a create comment link.	Researcher clicks on create comment link	Go to Step 3	None	
3	Researcher Logins	System verifies	Go to Use Case Step	None	

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	into the system.	Login Credentials	5		
3		Login Credentials are incorrect	Displays invalid Login message	Error message	
6	Researcher clicks submit to the typed in comment	System verifies that there is some string to submit	Go to Use Case Step 7	None	
6		There is no string to submit	Display invalid text submission	Error Message	
7		User selected submit	System places string into the comment database	None	

Use Case Name: Edit Comment

Developer Name: Adil Arif

Use Case Number: 2.2

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	Researcher clicks on a create comment link.	Researcher clicks on create comment link	Go to Step 3	None	
3	Researcher Logins into the system.	System verifies Login Credentials	Go to Use Case Step 5	None	
3		Login Credentials are incorrect	Displays invalid Login message	Error message	
6	Researcher clicks submit to the typed in comment	System verifies that there is some string to submit	Go to Use Case Step 7	None	

6		There is no string to submit	Reverts to the original string	None	
7		User selects submit	System edits the string on the comment database	None	

Use Case Name: Delete Comment

Developer Name: Adil Arif

Use Case Number: 2.3

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2.	Researcher clicks on a delete comment link.	Researcher selects the delete comment link	Go to Step 3	None	
3	Researcher Logins into the system.	System verifies Login Credentials	Go to Use Case Step 5	None	
3		Login Credentials are incorrect	Displays invalid Login message	Error message	
5	System Deletes Comment	Researcher selected delete comment	Database updated	None	

Use Case Name: Report Inappropriate Comment

Developer Name: Adil Arif

Use Case Number: 2.4

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
4	A user clicks the report inappropriate comment	User selects Report Inappropriate Comment	Step 5	Message indicating the stall will be notified	
4		User selects Report Inappropriate Comment	The system will notify the staff's login screen	None	

Use Case Name: Delete Artifact

Developer Name: Adil Arif

Use Case Number: 2.5

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	Researcher Logins into the system.	System verifies Login Credentials	Go to Use Case Step 4	None	
2		Login Credentials are incorrect	Displays invalid Login message	Error message	
4	Researcher clicks the Delete Artifact button	Researcher clicks the Delete Artifact button	Database Updated	None	

Use Case Name: Create Sigla Tag

Developer Name: Adil Arif

Use Case Number: 2.6

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
1	Researcher Logins into the system.	System verifies Login Credentials	Go to Use Case Step 3	None	
1		Login Credentials are incorrect	Displays invalid Login message	Error message	
4	Staff selects Create Sigla Tag	Staff clicks Create Sigla Tag	Go to Use Case Step 5	None	
5	Staff writes a new Sigla Tag	Staff entered a string	Go to Use Case Step 5	None	
		Staff clicked submit	Database updated	None	

Use Case Name: Upload Artifact

Use Case Number: 001

Developer Name: Patrick Yount

Use Case						Completed
Step #	Function Name	Test Criteria	Test Results	Outputs	Who, Date	
2	System validates login information.	Login contains no empty fields (username, password).	Continue validation.	None		
2		Login contains empty fields (username, password).	Displays invalid login error message.	Error message		
2	Continued validation	Username and password are found on system and are valid.	Go to Use Case Step 3	None		
2	Continued validation	Username and password are not found on system or are invalid.	Displays invalid login error message.	Error message		
7	System validates form is complete	No required field (name, location, date found) is empty.	Go to Use Case Step 8	None		
7		A required field (name, location, date found) is empty.	Displays incomplete form error message	Error message		

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8	Researcher confirms 'Upload Artifact' submission	User selects SUBMIT.	Database updated	Completion message
8		User selects CANCEL	Database NOT modified	Cancellation message

Use Case Name: Update News

Use Case Number: 007

Developer Name: Patrick Yount

Use Case	Step #	Function Name	Test Criteria	Test Results	Outputs	Who, Date	Completed
	2	System validates login information.	Login contains no empty fields (username, password).	Continue validation.	None		
	2		Login contains empty fields (username, password).	Displays invalid login error message.	Error message		
	2	Continued validation	Username and password are found on system and are valid.	Go to Use Case Step 3	None		
	2	Continued validation	Username and password are not found on system or are invalid.	Displays invalid login error message.	Error message		
	6	System validates	No required field (article, author,	Go to Use Case	None		

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	form is complete	date) is empty.	Step 7		
6		A required field (article, author, date) is empty.	Displays incomplete form error message	Error message	
7	Staff member confirms 'Update News' submission	User selects SUBMIT.	'News' is updated	Completion message	
8		User selects CANCEL	'News' is not updated	Cancellation message	

Use Case Name: Upload Artifact**Use Case Number: 001****Developer Name: Patrick Yount**

Use Case					Comple
Step #	Function Name	Test Criteria	Test Results	Outputs	Who, Da
2	System validates login information.	Login contains no empty fields (username, password).	Continue validation.	None	
2		Login contains empty fields (username, password).	Displays invalid login error message.	Error message	

2	Continued validation	Username and password are found on system and are valid.	Go to Use Case Step 3	None	
2	Continued validation	Username and password are not found on system or are invalid.	Displays invalid login error message.	Error message	
7	System validates form is complete	No required field (name, location, date found) is empty.	Go to Use Case Step 8	None	
7		A required field (name, location, date found) is empty.	Displays incomplete form error message	Error message	
8	Researcher confirms 'Upload Artifact' submission	User selects SUBMIT.	Database updated	Completion message	
8		User selects CANCEL	Database NOT modified	Cancellation message	

Use Case Name: Administrate

Developer Name: Geoff Montee

Use Case Number: SCR-012

Use Case Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
1	Check authentication session	User is logged into a Staff account	Print usual administration options	Usual admin root page	
		User is logged into non-staff account	Print error message saying that the user has insufficient privileges	Error Message	
		User is not logged in	Redirect user to Login Use Case	Redirect	
2.1	Modify users	User clicks Modify Users link	Redirect to Modify Users page to perform Modify Users Use Case	Redirect	
2.2	Update News	User clicks Update News link	Redirect to Update News page to perform Update News Use Case	Redirect	
2.3	Create Siglum Tag	User clicks Create Siglum Tag link	Redirect to Create Siglum Tag page to perform Create Siglum Tag Use Case	Redirect	

Use Case Name: Register as Researcher

Developer Name: Geoff Montee

Use Case Number: SCR-004

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
1	Check current session	No current authentication session	Go to Use Case Step 2	Usual input form	
		User is currently logged in	Display message that user must log out to register a new account	Error message	
4	System validates Researcher Information	Researcher Information is valid	Insert information into database and then go to Use Case Step 5	none	
		First name is not valid	Go to Alternate Path Step 4.1 and Flag first name as invalid	Error message and reload form	
		Last name is not valid	Go to Alternate Path Step 4.1 and Flag last name as invalid	Error message and reload form	
		Organization name is not valid	Go to Alternate Path Step 4.1 and Flag organization name as invalid	Error message and reload form	
		E-mail address is not valid	Go to Alternate Path Step 4.1 and Flag e-mail address as invalid	Error message and reload form	
		No choice for language	Go to Alternate Path Step 4.1 and Flag	Error message and reload	

			language choice as invalid	form	
		Username is not valid	Go to Alternate Path Step 4.1 and Flag username as invalid	Error message and reload form	
		Username is taken	Go to Alternate Path Step 4.1 and Flag username as invalid because it's taken	Error message and reload form	
		Password is invalid	Go to Alternate Path Step 4.1 and Flag password as invalid	Error message and reload form	
		Repeated password does not match	Go to Alternate Path Step 4.1 and Flag repeated password as incorrect	Error message and reload form	
5	Confirmation	Registration went smoothly	User is redirected to Registration Confirmation Page	Message on Registration Confirmation page	

Use Case Name: Edit Artifact

Developer Name: Robert Hall

Use Case Number: 5

Use Case Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	User submits the query.	User selects SUBMIT	Continue to System Validates Input Data.	None	
		User selects CANCEL	User is forwarded to the previous page. Changes are not applied.	Previous page	
3	System validates Input data.	Data is valid.	Displays a confirmation message.	Success message	
		Uploaded image is an invalid type.	Display an invalid image type error message.	Error Message	
		Date is not a correct format.	Display an invalid date format error message.	Error Message	
		Any field contains an invalid character.	Display an invalid character error message.	Error Message	

Use Case Name: Advanced Search (previously, Search by Attributes)

Developer Name: Robert Hall

Use Case Number: 6

Use Case Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	User submits the query.	User selects SUBMIT	Continue to System Displays Results.	None	
		User selects CANCEL	User is forwarded to the previous page.	Previous page	
3	System displays	Specified criteria	Matching Artifacts	Matching	

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	Search Results.	matches at least one Artifact.	are displayed.	Artifact Links	
		Specified criteria does not match any Artifact	Display a "no matches found" error message.	Error Message	

Use Case Name: Search by Tag

Developer Name: Robert Hall

Use Case Number: 7

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
3	System displays Tag Search Results.	Specified tag matches at least one different Artifact.	Matching Artifacts are displayed.	Matching Artifact Links	
		Specified tag does not match any different Artifact	Display a "no matches found" error message.	Error Message	

Use Case Name: Login

Developer Name: Yuan Yao

Use Case Number: 3

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
4	System validates The User Name and Password	The Name and Password in Correct format	Continue validation	None	

4		The Name and Password are not in Correct format	Display incorrect form Error Message, and go to the login window, and let the researcher re-type his Name and Password	Error Message	
4	Continue validation	The Name is found on system.	Continue validation		
4		The Name is not found on system.	Display non-exist user error message, and go to the login window, and let the researcher re-type his Name and Password	Error Message	
4	Continue validation	The Password supply by researcher match to the password in database	Validation done, and go to welcome page		
4		The Password supply by researcher does not match to the password in database	Display wrong password error message, and go to the login window, and let the researcher re-type his Name and Password	Error Message	

Use Case Name: Update Profile

Developer Name: Yuan Yao

Use Case Number: 10

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Use Case Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
2	System validate whether researcher has authority's to update his information	Researcher has authority to update	Go to step 3		
2		Researcher do not has authority to update(may be his account has been freeze)	Display the error message to inform Researcher that his do not has right to update his profiles	Inform message	
5	System validate the information which fill out by Researcher	Researcher fill out all the info	Continues validation		
5		Researcher miss some parts of info	Change color of the missing parts and go back to the previous page, and let Researcher re-fill the missing parts	Error message and color changed on missing part	
5	Continues validation	The information supplied by Researcher all in correct format	Validation done, data update, system sends an email to user's mail box.	Email send	
5		Some information supplied by Researcher are not in correct format	Display error message and go to step 3	Error message	

Use Case Name: Edit Researcher

Developer Name: Yuan Yao

Use Case Number: 12

Use Case

Step #	Function Name	Test Criteria	Test Results	Outputs	Completed
4	System validate the information edit by staff	some information is missing	Missing info error message and go back to previous page	Error message	
4		No information is missing	Continues validation		
4	Continues validation	Some information is in wrong format	Wrong format info error message and go back to previous page	Error message	
4		No information is in wrong format	Validation done, a email send to Researcher	Email send	

Method Description

Name	Register()
Class Name	Researcher
Purpose	This method is used for Researchers to register into the system
Triggers/Events	A User clicks on the register link at the top of the page

Arguments Received

Name	Data Type	Comments
firstname	String	
lastname	String	
organization	String	
language	String	
password	String	
emailaddress	String	

Methods from Other Classes

ClassName.MethodName	Comments

Argument Returned

Data Type	Comments
void	

Algorithm Specification

<pre> FirstName = firstname; LastName = lastname; Organization = organization; Language = language; Password = password; </pre>

```
emailAddress = emailaddress;
```

Name	EditInfo()
Class Name	Researcher
Purpose	This method allows a researcher to edit their personal information.
Triggers/Events	Researcher selects 'Update Profile.'

Arguments Received

Name	Data Type	Comments
FirstName	String	
LastName	String	
Organization	String	
Language	String	
Password	String	

Methods from Other Classes

ClassName.MethodName	Comments

Argument Returned

Data Type	Comments
Boolean	

Algorithm Specification

```

If (password is null)
    return false
else
    update FirstName, LastName, Organization, Language, and Password
    return true

```

Name	Search()
Class Name	EntireCollection
Purpose	This method returns a set of artifacts that are tagged with a particular SiglumTag.
Triggers/Events	General User keys in various siglum tags into Search Form

Arguments Received

Name	Data Type	Comments
Keyword	String	

Methods from Other Classes

ClassName.MethodName	Comments

Argument Returned

Data Type	Comments
void	Rather than a return, it redirects the General User to the Search Results page with the matching artifacts

Algorithm Specification

```
<?php
//This assumes a mysql database using PHP, however it is generic enough to show how
//something like this should operate.

function Search($keyword)
{
$query = "SELECT * FROM Artifacts JOIN SiglumTags ON Artifacts.Artifact_ID =
SiglumTags.Artifact_ID where SiglumTag.SiglumType = " . $keyword;

$result = mysql_query($query);

$artifacts = mysql_fetch_assoc($result);

print_results_page($artifacts);
}

?>
```

Name	EditArtifact()
Class Name	Artifact
Purpose	This method allows a Researcher to edit the Attributes of an Artifact that the Researcher previously submitted.
Triggers/Events	Researcher selects the "Edit" option in the Artifact page.

Arguments Received

Name	Data Type	Comments
Artifact_ID	Integer	Identifier of Artifact to be edited.
Name	String	
Location	String	
DateFound	Integer	

Methods from Other Classes

ClassName.MethodName	Comments

Argument Returned

Data Type	Comments
Boolean	Denotes success or failure.

Algorithm Specification

--

```

If (validateFields() && Artifact.Owner == Researcher)

    return true

else

    return false

```

Name	Login(username:string, Password:string)
Class Name	Researcher
Purpose	This method login users as researchers when valid user names and passwords were entered
Triggers/Events	Type user name and passwords, and click login button

Arguments Received

Name	Data Type	Comments
username	String	
Password	String	

Methods from Other Classes

ClassName.MethodName	Comments
Member.Check(username:string, Password:string)	Check correctness of username and password

Argument Returned

Data Type	Comments
Boolean	

Algorithm Specification

```
If (Member.Check(username:string, Password:string))
    return true
else
    return false
```

Scenario Analysis Table

Use Case Name	Create Comment
Use Case ID	SCR-002

Normal Scenario

Step #	Step Text	Data	Screens	Reports
		Stored	Needed	Needed
1.	Researcher views Artifact		View Artifact	
2.	Researcher clicks on the Create Comment Link			
3.	Researcher Log's into the System		Researchers: Login Form	
4.	System Validates Researcher login			
5.	Researcher types in comment			
6.	Researcher clicks submit to the typed in comment	Submitted Comment		
7.	System places comment on the artifact page			

Use Case Name	Edit Comment
Use Case ID	SCR-002

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1.	Researcher views Artifact		View Artifact	
2.	Researcher clicks on the Edit Comment Link			
3.	Researcher Log's into the System		Researchers: Login Form	
4.	System Validates Researcher login			
5.	Researcher edit's in comment			
6.	Researcher clicks submit to the typed in comment	Submitted Comment		
7.	System edits comment on the artifact page			

Use Case Name	Delete Comment
Use Case ID	SCR-002

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
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Team Blue Hat

1.	Researcher views Artifact		View Artifact	
2.	Researcher clicks on the Delete Comment Link			
3.	Researcher Log's into the System		Researchers: Login Form	
4.	System deletes comment			

Use Case Name	Delete Artifact
Use Case ID	SCR-002

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1.	Researcher views Artifact		View Artifact	
2.	Researcher Log's into the System		Researchers: Login Form	
3.	System Validates Researcher login			
4.	Researcher clicks the Delete Artifact Button.			
5.	The system deletes the artifact from the database			

Use Case Name	Create Sigla Tag
Use Case ID	SCR-006

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1.	Staff Login to the System		Researchers: Login Form	
2.	System Validates Staff's login			
3.	Staff Enters Administrate		Administrate	
4.	Staff selects Create Sigla Tag.			
5	Staff writes a new Sigla tag.	Sigla Tag		
6.	The system creates a new Sigla tag			

Use Case Name	Report Inappropriate Comment
Use Case ID	SCR-002

Normal Scenario

Step	Step Text	Data	Screens	Reports
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Team Blue Hat

#		Stored	Needed	Needed
1.	A user views the artifact		Artifact	
2.	A user views the comments			
3.	A user views an inappropriate comment			
4.	A user clicks the report inappropriate comment	Comment ID		
5.	The staff are notified			

Use Case Name	Login
Use Case ID	3

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Researcher type his user name and password		Login Screen	
2	System validate the user name and			

	password			
3	Screen display whether the login is successful or not. If login is successful. The system link researcher to other page.		Login-Confirmation Screen	

Use Case Name	Update Profile
Use Case ID	10

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Researcher edit his information (Name, Address, Phone number, etc)		Update Profile Screen	
2	System validate the information			
3	System confirms the information	Researcher info	Update-Confirmation Screen	
4	System email update information to researcher's mail box			

Use Case Name	Verify Researcher
Use Case ID	11

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Staff pull out specific researcher from researcher list		Researcher list Screen	
2	Staff verify the Researcher's information		Researcher profile screen	
3	System confirm the validation made by staff	Store the validation		

Use Case Name	Edit Researcher
Use Case ID	12

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Staff pull out specific researcher from researcher list		Researcher list Screen	

2	Staff modify the researcher' information		Researcher profile screen	
4	Staff submits his modification			
5	System confirm this Modification	Researcher info		
6	System email a notice to researcher's mail box			

Use Case Name	Delete Researcher
Use Case ID	13

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Staff pull out specific researcher from researcher list		Researcher list Screen	
2	Staff press delete button		Researcher profile screen	
3	System confirm this deletion			

4	System email a notice to researcher's mail box			
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Use Case Name	Register as Researcher
Use Case ID	SCR-004

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1.	General User arrives at the Registration page.		Registration Form	
2.	General User enters Researcher Information.		Registration Form	
2.1	General User enters first name into corresponding text box.		Registration Form	
2.2	General User enters last name into corresponding text box.		Registration Form	
2.3	General User enters organization name into corresponding text box.		Registration Form	
2.4	General User enters e-mail address into corresponding text box.		Registration Form	
2.5	General User picks language from drop-		Registration Form	

	down list box.			
2.6	General User enters desired username into corresponding text box.		Registration Form	
2.7	General User enters desired password into corresponding text box with input hidden.		Registration Form	
2.8	General User repeats desired password into corresponding text box with input hidden.		Registration Form	
3.	General User hits submit button.		Registration Form	
4	System validates Researcher Information.			
5.	System directs user to Display Registration Confirmation page.		Display Registration Confirmation	

Use Case Name	Administrate
Use Case ID	SCR-012

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1.	The authenticated Staff user arrives at the Administration Root		Administration Root Page	

	page.			
2.	The user clicks on an Administration Task link.		Administration Root Page	

Use Case Name	Upload Artifact
Use Case ID	001

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Researcher logs in.		SCR-003 Researchers: Login Form	
2	Researcher selects 'Manage Artifact.'		SCR-013 Home Page	
3	Researcher selects 'Upload Artifact.'		SCR-013 Home Page (Manage Artifact menu expanded)	
4	Researcher completes 'Upload Artifact Form.'		SCR-001 Researchers: Upload Artifact Form	
5	Researcher submits		SCR-001	

	'Upload Artifact Form.'		Researchers: Upload Artifact Form	
6	System stores artifact.	name, location, date found	None	

Use Case Name	Update News
Use Case ID	007

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Staff member logs in.		SCR-003 Researchers: Login Form	
2	Staff member selects 'Update News.'		SCR-013 Home Page	
3	Staff member completes 'Update News Form.'		SCR-007 Administration: Update Home Page News	
4	Staff member submits 'Update News Form.'		SCR-007 Administration: Update Home Page News	
5	System stores news.	article, author, date	None	

Use Case Name	Edit Artifact
Use Case ID	5

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	Researcher edits Name, Location, Date Found, Image, and/or Keyword fields.		Edit Artifact: Attributes	
2	Researcher submits transaction.			
3	System validates input data.			
4	System displays a confirmation message.	Artifact Attributes	Edit Artifact: Attributes	

Use Case Name	Search by Attribute
Use Case ID	6

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	User fills in the search fields.		View Artifact: Search Form	

2	User submits query.			
3	System displays search results.		View Artifact: Search Results	

Use Case Name	Search by Tag
Use Case ID	7

Normal Scenario

Step #	Step Text	Data Stored	Screens Needed	Reports Needed
1	System displays tag results.		View Artifact: Search Results	

User Interface Navigation Matrix

Delete Comment Use Case

	View Artifact: Attributes & Comments		
View Artifact: Attributes & Comments	Delete button		

Create Comment Use Case

	View Artifact: Attributes & Comments	View Artifact: Create Comment	
View Artifact: Attributes & Comments	X	Create Comment Button	
View Artifact: Create Comment	Submit Button	X	

Edit Comment Use Case

	View Artifact: Attributes & Comments	View Artifact: Edit Comment	
View Artifact: Attributes & Comments	X	Edit button	
View Artifact: Edit Comment	Submit Button	X	

Report Inappropriate Comment Use Case

	View Artifact: Attributes & Comments		
View Artifact: Attributes & Comments	Report Inappropriate Comment button		

Create Artifact Tag Use Case

	Create Artifact Tag	Administration Root Page	
Create Artifact Tag	X	Enter button	
Administration Root Page	Create Artifact Tag link	X	

Upload Artifact

	L	HP	UA	Conf
LoginScreen (L)	X	Submit	X	X
HomePageScreen (HP)	Log Out	X	Upload Artifact	X
UploadArtifactScreen (UA)	Log Out	Cancel	X	Submit
ConfirmationScreen (Conf)	X	Submit	Modify	X

Update News

	L	HP	UN	Conf
LoginScreen (L)	X	Submit	X	X
HomePageScreen (HP)	Log Out	X	Update News	X
UpdateNewsScreen (UN)	Log Out	Cancel	X	Submit
ConfirmationScreen (Conf)	X	Submit	Modify	X

Register as Researcher Use Case

	Registration Form	Display Registration Confirmation
Registration Form	n/a	Submit
Display Registration Confirmation	Back	n/a

Administrate Use Case

	Researcher Login Form	Create New Siglum Tag	Update Home Page News	View User List	Administration Home Page	Researcher Manage Account	Revoke Researcher Privileges Confirmation
Researcher Login Form	n/a	n/a	n/a	n/a	Submit	n/a	n/a
Create New Siglum Tag	Logout	n/a	n/a	n/a	Back, "Administration Home Page" link	"Manage Account" link	n/a
Update Home Page News	Logout	n/a	n/a	n/a	Back, "Administration Home Page" link	"Manage Account" link	n/a
View User List	Logout	n/a	n/a	n/a	Back, "Administration Home Page" link	"Manage Account" link	Check username and select revoke privileges
Administration Home Page	Logout	"Create Siglum Tag" link	"Update News" link	"Manage Users" link	n/a	"Manage Account" link	n/a
Researcher Manage Account	Logout	n/a	n/a	n/a	"Administration Home Page" link	n/a	n/a

Edit Artifact

	Edit Artifact	Success/Failure	View Artifact
Edit Artifact	N/A	Submit	Cancel
Success/Failure	N/A	N/A	Timer OR Link
View Artifact	Edit	N/A	N/A

Advanced Search

	Search Form	Search Results	Home Page	View Artifact
Search Form	N/A	Search	Cancel	N/A
Search Results	Redefine Search	N/A	Home	Thumbnail
Home Page	Advanced Search	N/A	N/A	N/A
View Artifact	N/A	N/A	Home	N/A

Search by Keywords

	Search Bar (Top Frame)	Search Results	View Artifact
Search Bar	Permanent	Search	N/A
Search Results	Permanent	N/A	Thumbnail
View Artifact	Permanent	N/A	N/A

Search by Tag

	Tag Cloud (Home Page)	Search Results	View Artifact
Tag Cloud	N/A	Select Any Tag	N/A
Search Results	Home	N/A	Thumbnail
View Artifact	Home	N/A	N/A

Login Use Case

	Login Form	Wrong Password or non-exist User	Register as new User	Success Login
Login Form	N/A	Confirm the alert window	Back	Back
Wrong Password or non-exist User	User type in wrong info	N/A	N/A	N/A
Register as new User	Click the registration button	Click the registration button	N/A	Back
Success Login	User type in Correct info	N/A	After fill out all require info and click submit button	N/A

Update Profile

	Researcher manage page	Information fill-in form	Picture upload	Wrong information alert	Success Submit
Researcher manage page	N/A	Back	N/A	User click cancel button	User click confirm button and change have been update
Information fill-in form	User Click update button	N/A	Back	User click confirm button	Back
Picture upload	N/A	Click the Picture-upload button	N/A	N/A	N/A
Wrong information alert	N/A	User type wrong info	N/A	N/A	N/A
Success Submit	N/A	User type correct info and click submit button	N/A	N/A	N/A

Verify Researcher

	Administrate page	Researcher information page	Researcher Privileges Grant	Researcher Privileges Deny
Administrate page	N/A	Back	Click confirm button	Click confirm button
Researcher information page	Staff click view button	N/A	Back	Back
Researcher Privileges Grant	N/A	Click the accept button	N/A	N/A
Researcher Privileges Deny	N/A	Click the deny button	N/A	N/A

Edit Researcher

	Administrate page	Researcher Information modification page	Modification Success	Modification Fail
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Administrate page	N/A	Back	Click confirm button	Click confirm button
Researcher Information modification page	Staff click modification button	N/A	Back	Back
Modification Success	N/A	Click the accept button	N/A	N/A
Modification Fail	N/A	Click the cancel button	N/A	N/A