# **Problem Statement**

## Executive Summary

This project’s purpose is to create a system that will allow artifact and antique collectors and the industries related to them to track data about various artifacts. It is meant to serve as an efficient, convenient, and secure way of exchanging information about these items. Currently, the system is only able share artifacts among users but will be expanded to handle more items and institutions.

**Introduction**

Artifacts and antiques are items of value from a previous era used today for research and collection. Despite the fact that artifacts are found and collected globally and can have high monetary value, there has yet to be a universal system to track them.

Elmer Guerri, a collector of Native American artifacts, has requested an online, easy to access, and secure system that can be used by collectors and institutions across the world. The goal is to be able to safely trade and share information on artifacts including their origin, validation documentation, and current and past owners.

**Problem Statement**

Presently, there is no universal method of documenting artifacts. Each collector uses his own personal logging method, usually by paper and pen. This makes trading and sharing artifacts among various collectors very difficult and often requires more time and money than necessary. Additionally, many collectors do not keep copies of their logs, meaning that if the book is damaged or misplaced, much or all of the data can be lost forever. This system aims to replace current methods with a convenient and easy means of sharing all information online in a secure manner. It will help both private collectors and research institutions track their current collections and help validators of artifacts keep track of artifacts they have validated.

**Stakeholders**

Elmer Guerri - Original proposer and main client as well as an avid collector of Native American artifacts

Andrew Engle - Technical aide to the development and deployment of the system

Fred Marsh - Well established collector that is invested in the system and interested in being a tester

Rick Fitzgerald - Well established collector that is invested in the system and interested in being a tester

**Scope**

The scope of the project is that of a web-based system that will allow multiple users to concurrently store and access information about their own private collections as well as the collections of others. The system will feature a tiered permissions list that will allow the collection owner to control who will have access to view his or her collection. The current system is capable of handling use by personal collectors, but expansion for use by museums, insurance companies, and archaeological researchers is planned to be implemented.

**Elevator Speech**

Presently, there is no universal system to track artifacts despite the desire for one from the artifact collecting community. Introducing such a system would be highly beneficial as it would give a large amount of accessibility to the artifact collecting community and institutions. Additionally, because there is no competition, the system has the potential to become very widely used.

**Requirements**

1. User can register to the site and become a member.

2. A member can register information for archaeological items.

3. System handles authentication and security for users/members.

4. A member can create tiered permission levels to define other users’ access to his/her items.

5. Members can view artifacts that others have uploaded information about.

6. Members can search for artifacts with different filters (i.e. historical period, user interests).

7. Members can search for artifacts using keywords and tags.

8. System supports importing and exporting of data.

- Excel

- PowerPoint (export only)

**Quality Attributes**

1. Security - Due to the nature of the information the system will handle and the potential for malice should unauthorized access occur, security is of the utmost importance.

2. Usability - The registry must be easy to use for anyone, including those not familiar with the advanced web technologies.

3. Modifiability - The system is highly likely to be expanded upon after initial release and therefore needs to be flexible and easy to change.

4. Scalability - Since the registry will be a network used concurrently by multiple people, it will need to be able to handle the traffic of potentially thousands of users, each with a large collection.

5. Performance - The registry should run smoothly while potentially in use by hundreds of people at a time and run on computers as well as smart phone browsers.

6. Testability - In particular, the security of the system will need to be rigorously tested. Because it will need to be available at all times, the value of stress testing is high.

7. Supportability - Since this project is being handled by a small team of students, it will need to be highly supportable as there will likely not be a dedicated group assisting customers.

**Risks**

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| ID | Description | Prob. | Impact | Strategy | Outcome | Resources |
| R1 | Scope too large for time frame | Low | System is not fully prepared for intended clients | Focus on security and key features | not all desired features are implemented, but the system is ready for deployment and expansion | RC, DG, NK, JL, WS |
| R2 | Server or database is unreliable and crashes often | Low | System is undesirable, and will lose clientel | Acquire a different host, and re-deploy system on a more reliable server | System is temporarily unavailable, but will be restored | RC, DG, NK, JL, WS |
| R3 | Client communication is lacking | Low | Delivered system does not match what the client wanted | Keep in close contact with the client | System will remain true to the client’s needs | RC, DG, NK, JL, WS |
| R4 | Team frequent scheduling conflicts for weekly meetings | Med | Team becomes confused on responsibilities | Meet with partial teams, as well as personal meetings by a subset with those unable to attend | Team will be more aware, if less united, on what each member’s responsibilities are | RC, DG, NK, JL, WS |
| R5 | Too many bugs in code | Low | System will not perform as desired | Frequent tests and peer code reviews |  | RC, DG, NK, JL, WS |
| R6 | Github fails | Low | Version control becomes an issue | Group programming and manual merging will be used, until github is back online |  | RC, DG, NK, JL, WS |

**Changelog**

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| Revised By | Revision Number | Revision Date | Description |
| David Galvez, Nicolas Klein, Joe Lee, William Senat | 1.0.0 | 10/03/2013 | Initial draft |