

Texas Tech University

CS4366 Senior Capstone Project

Requirement Analysis

Authors: Instructor:

Randall Harper Mr. Cong Pu

Jason Weber

James Little

Patrick Braud

Table of Contents

[1. Introduction 3](#_Toc431246657)

[1.1 Purpose of the system 3](#_Toc431246658)

[1.2 Scope of the system 3](#_Toc431246659)

[1.3 Objectives and success criteria of the software 3](#_Toc431246660)

[1.4 Definitions, acronyms, and abbreviations 3](#_Toc431246661)

[2. Proposed System 4](#_Toc431246662)

[2.1 Functional Requirements 4](#_Toc431246663)

[3. Nonfunctional Requirements 4](#_Toc431246664)

# Introduction

TTU CS Blog will be a community hub where students can reach out to peers seeking advice ranging anywhere from class topics to research. Anyone can visit the forums, but only registered users may post a question to the community. Users will be able to search through the forums for specific topics.

## Purpose of the system

The aim of TTU CS Blog will be to give access to a free community of Texas Tech university computer science students. We want to provide a solution to students who may not have free time after class to meet other students in person or if they have a question that requires feedback from more than one person.

## Scope of the system

Using the blog, students will gain access to their peers after classes. Even from home, they can communicate ideas and pose questions they need help on.

## Objectives and success criteria of the software

* Project goal:
  + Easy to use, user-friendly interface
  + Correctly loading web pages the user requests
  + Maintain a database of questions waiting to be answered, while holding correctly answered questions as well.
* Project success criteria:
  + Simple and accessible interface
  + Implemented searchable backend database

## Definitions, acronyms, and abbreviations

TTU – Texas Tech University

CS - Computer Science

WAMP - A Windows Web development environment for Apache, MySQL, and PHP databases

MAMP – A Macintosh Web development environment for Apache, MySQL, and PHP database

AWS – Amazon Web Services

MySQL – an open source relational database management system.

# Proposed System

Once implemented, the TTU CS Blog will provide a free community of fellow students to be a part of. Not everyone has time to meet with professors or organize meetings with other students. So, this will be a resource where students can both ask and answer questions relating to CS courses.

## Functional Requirements

1. They system shall allow users to make posts.
2. The system users will have different access to posting.
3. The system user ‘guest’ will not have access to post.
4. The system users ‘faculty’ will only post under research topics and articles.
5. The system shall maintain a total number of topics and courses.
6. The system users will have different topics and courses to post to.
7. The system users will gain credit for correctly answering a posted question requested by another user.
8. The system user ‘administrator’ will have to authority to close or move a post.
9. The system shall automatically notify the user who made a post when another user has attempted to answer.
10. The system shall mark each post as answered or unanswered.
11. The system shall close a post if it remains unanswered after the time out period.

# Nonfunctional Requirements

1. Security:
   1. The system should have password encryption for its users.
2. Performance:
   1. Processing time: The response time of the webpage will only be limited by the user’s internet connection. However, it will not take longer than 1 second to scroll up or down a webpage in the domain.
   2. Resource Usage: The webpage should not affect the system any differently than another similar webpage. Different web browsers may produce a different amounts of resources used.
3. Reliability: The system should be accessible 99% percent of the time. The other one percent will be allotted for any server updates or maintenance.
   1. Error handling: The software should report all issues posting/answering questions, as well as logging in.
4. Usability:
   1. Required User Ability: The webpage should be usable by anyone with basic computer skills.
   2. Documentation: The software will have a user guide for basic use of the system
   3. Language: The software will be written with an English interface.
5. Implementation Constraints:
   1. Language: The system will be written in the PHP programming language.
   2. Operating Systems: The system will be available on Windows operating systems as well as Macintosh, since it is written in PHP.