

Texas Tech University

CS4366 Senior Capstone Project

TTU CS Blog

Requirement Analysis

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# 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 search through the forums, but only registered users may post a question to the community.

## 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 before or after class to meet other peers in person. Or if they have a question that requires feedback from more than one person, they can effortlessly reach out to many peers.

## Scope of the system

Using the blog, students will gain access to their peers at any time, not just on campus. One common place for communicating ideas and posting questions they could use 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 computer science.

## Functional Requirements

* User Functional Requirements

1. The user will be able to make posts under topics.
2. The user ‘guest’ will not have access to post.
3. The user ‘faculty’ will only have access to post under the topics research and articles.
4. The user ‘administrator’ will have the authority to close or move a post.
5. The user ‘registered’ will mark answers on their posted questions as either ‘top answer’, ‘helpful’, or ‘incorrect’.
6. Users 'guest', 'faculty', 'administrator', and 'registered' have the ability to search the blog.

* System Functional Requirements

1. The system shall maintain a total number of topics.
2. The system shall grant users credit for correctly answered questions requested by another user. If marked ‘top answer’, the user who answered the question will receive double credit. If marked ‘helpful’, the user will gain the base credit amount. If marked ‘incorrect’, the user will not gain any credit.
3. The system shall automatically email the user who made a post when another use has attempted to answer.
4. The system shall automatically email the user who answered a post when it has been marked by the user who posted the question.
5. The system shall mark each post as answered or unanswered.
6. 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% of the time. The other 1% 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.
5. Language: The software will be written with an English interface.
6. 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.