



NORTH CAROLINA AGRICULTURAL
AND TECHNICAL STATE UNIVERSITY™

CSEEE Collaboration Web Application Requirements Analysis Documents (RAD) Hackathon – Spring 2016

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1 INTRODUCTION

1.1 PURPOSE OF A REQUIREMENTS ANALYSIS

A requirements analysis document (RAD) encompasses activities conducted to determine the needs or conditions for a new or altered product. It commonly takes place after a request is received. It is the process of gathering information about business and technical requirements supporting a request, consolidating this information into a cohesive document, and assisting stakeholders in prioritizing these needs and conditions. A RAD is critical to the success of a project and can serve as a contractual basis between a customer and a vendor. Requirements must be documented, actionable, measurable, testable, related to identified business needs or opportunities, and defined to a level of detail sufficient for the design of a project.

The requirements management plan, a separate document, is used to document the necessary information required to effectively manage project requirements from definition, through traceability, to delivery and represents a subsequent document to the RAD.

1.2 AUDIENCE

The audience for this RAD are the students and other participants in this years Hackathon.

2 CURRENT SYSTEM

As of now there isn't a current system in place as this is a new project that is being developed.

3 PROPOSED SYSTEM

3.1 OVERVIEW

CSEEE (Pronounced CS "Triple E") will be a web-based application that will allow students of the 5th floor of the College of Engineering in McNair Hall to interact with one another and combine each other's skillsets to create a strong environment of innovation and accelerated learning capabilities. This web-application will also serve as a way to bring together the six organizations in their respective fields for students which are the following:

- ACM (Association for Computing Machinery)
- UPE (Upsilon Pi Epsilon)
- IEEE (Institute of Electronic & Electrical Engineers)
- STARS
- Robotics Club
- Cyber Security Club (Recently Merged with ACM SIGS Group)

Students should be able to interact with other students in different majors as well as being able to receive more information about their own respective disciplines on the website as to what types of positions are sought after in their field, the base skills required to fill that position, the different new technologies being used in their field, and how to receive the resources needed to develop a skillset for the new technologies being developed in their field.

3.2 FUNCTIONAL REQUIREMENTS

- 3.2.1** Student should be able to register as a new user and store their credentials into the system.
- 3.2.2** Student should be able to login with their respective credentials (@aggies.ncat.edu for students and password).
- 3.2.3** Student should be able to edit their profile.
- 3.2.4** Student should be able to view other student's profiles.
- 3.2.5** Student should be able to view information about their respective fields, the sought after positions in their field, the new positions in their fields, and the skills required to fill the position.
- 3.2.6** Profiles must have in depth information about the student (graduation date, major, link to resume, etc.)

3.3 NONFUNCTIONAL REQUIREMENTS

3.3.1 USABILITY

- Web application should display all information about the student when the other student views them.
- Student should have a default photo posted unless they have their own photo they wish to upload.
- “About” and “Help” information about the web application must be able to be seen at any point during the session in which the person is logged in.
- Web application must display its' affiliation with its' respective major.
- Application must be able to be viewed in a mobile device respectively. Either can be connected to an Android/iOS application or created via Bootstrap to have the same effect. (If done as a mobile application, it can be cross-platform or natively built).

3.3.2 RELIABILITY

- Components of the project code will be tested alongside the implementation phase to ensure that they are functional.
- The application will be coded and test procedural style to test each part of the application block by block.
- Final, integrated project code will be tested via node.js or via the server provided by the advisor to ensure that greater than or equal to 80% of the

integrated code is covered at run-time, and is functioning. The remaining 20% will be inspected through manual testing to ensure the highest chance of being quality code.

3.3.3 PERFORMANCE

- Navigation between pages must be smooth in transition.
- All photos' and information must display in full and not in its' alternate form.
- Search engine will display accurate information when searching for other students.

3.3.4 SUPPORTABILITY

- The web application must not be browser dependent, i.e., it should be able to run on any browser supporting javascript, java, etc.

3.3.5 IMPLEMENTATION

- Project will be implemented in HTML, JavaScript, Angular.JS, Node.JS, MySQL, and CSS. You can also use any other technologies you'd like at your disposal such as Mongo DB, Bootstrap, HTML 5, jQuery, etc.

3.4 SYSTEM MODELS

3.4.1 USE CASE MODEL

Name:	RegisterNewUser
Actor:	Student
Entry	Web Application is running.
Conditions:	Student doesn't have a registered account.
Flow of	1. Student register function.
Events:	2. SYSTEM presents Professor/Student with <u>AccountRegistrationForm</u> 3. Student submits <u>AccountRegistrationForm</u>
Exit	<u>WebApplication</u> is now in a new state.
Conditions:	

4 GLOSSARY

Comprehensive Sketch: The page layout of a proposed design as initially presented by the designer to the client, showing the relative positions of text and illustrations before the final content of those elements has been decided upon.

Non Functional Requirement: A software requirement that describes not what the software will do but how the software will do it.

Advisor: A person who gives advice, typically someone who is expert in a particular field.

Client: The person who has bought the services to have the project constructed.

Appendix A: Requirements Analysis Approval

The undersigned acknowledge that they have reviewed this requirements analysis document and agree with its information. Changes to this version will be coordinated with, and approved by, the undersigned, or their designated representatives.

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____