

SE-380 Project 1:

Text News Service (N)

Overview

The purpose of this lab is to apply principles of requirements engineering to analyze and specify requirements for a software system of moderate size. The project work is to be accomplished in a small team environment, using a disciplined software process. Note: **coordinated team effort** and careful **planning** will be required to accomplish this project in the time allotted.

Project: Text News Service (N)

Project Description

The purpose of N is to provide a key-word search based text news service. Using a Mobile- or Web-based user interface, users are allowed to select a RSS or other similar news feed and define search keywords for each news feed. When news from a selected feed match selected keywords with an adequate (e.g., BM25 or similar) level of relevance, the system generates a text message of a textual summary or the most relevant sentence, i.e., the sentence with the highest similarity score with respect to the defined keywords, and sends a text message to the user's device or Twitter account. Note: Users may select multiple different feeds or the same feed multiple times and define different search keywords for each instance.

Requirements

N is required to support multiple concurrent users.

Users are allowed to create new RSS feeds and update existing RSS feed search keywords on the fly.

Users are allowed to browse most frequently used RSS feeds and keywords across users. The system is required to maintain each user's confidentiality.

Each user is required to register and be *authenticated* and *authorized* by N.

Web pages need to display appropriately for mobile and standard Web browsers.

Qualities

For...	The architecture should...
Scalability	<ul style="list-style-type: none">• Vertical and horizontal scalability to potentially large numbers concurrent users.• The system should scale with relative ease.
Usability	<ul style="list-style-type: none">• The user interface should be intuitively obvious to novice users.• The interface must be easy to use across different browsers and platforms.
Extensibility	<ul style="list-style-type: none">• Should be able to add new RSS feeds and update search keywords on the fly.
Performance	<ul style="list-style-type: none">• Users should receive text messages within 1 minute of the system receiving the respective RSS message.
Deployment	<ul style="list-style-type: none">• Easily deployable in clustered Web server environment.
Functions	<ul style="list-style-type: none">• Provide a means to perform functions to determine application usage statistics.
Security	<ul style="list-style-type: none">• User authentication and authorization.

Major Components

- Smartphone app
- Web front-end
- Web application server
- Database management system

The preliminary description of the project is sketchy and imprecise. There will be a lot of questions during the design process that will have to be answered. It is the responsibility of the team to plan for time that will be required for more elicitation and formalization. If the team makes any assumptions, during the analysis/specification process they have to be clearly stated

Acknowledgement

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