CPSC 301: Large-Scale Software Development

Laboratory Exercise #2

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1. Abstract

The proposed system is an application for use by the emergency department in Calgary hospitals. The primary functions of the system are communication and organization. "Communication" is loosely defined, for the purposes of this system, to be long-time, archivable messages in a forum-style organization. The purpose of the system is to replace and augment several already in-place systems to increase efficiency & help with resident training.

2. Requirements

(a). **Functional Requirements.** The system must provide:

(1) Access only to authorized users.
(2) A user-editable knowledge base.
(3) A long-term, archivable method of text-based communication.
(4) A method to access pre-recorded streaming videos.
(5) The ability to view and manage education session scheduling.
(6) A restricted-access interface for managing messages and other content submitted by users.

(b). **Quality Requirements.** The system must provide:

(1) The user-facing web interface for the proposed system must allow users to access all functionality quickly and as efficiently as possible.

(c). **Platform Requirements.** The system must:

(1) Be available for use on recent versions of popular web browsers such as Chromium/Google Chrome, Mozilla Firefox, Internet Explorer.

3. Use case

For the purposes of this use case, let $\mathcal{U}$ be a user and $\mathcal{S}$ be the system.

(a). **Name.** Submission of a long-term communication message.

(b). **Description.** $\mathcal{U}$ wants to submit a message to the long-term communication aspect of $\mathcal{S}$.

(c). **Pre-conditions.**

(1) $\mathcal{S}$ must be on-line and available.
(2) $\mathcal{U}$ must be logged in to $\mathcal{S}$.

(d). **Main flow: Successful submission.**

(1) From the main menu, $\mathcal{U}$ clicks on "Messages".[1]
(2) $\mathcal{S}$ sends the "Messaging" page to $\mathcal{U}$'s web browser.
(3) $\mathcal{U}$ clicks on a category link.
(4) $\mathcal{S}$ sends the "Messaging $\rightarrow$ Category" page to $\mathcal{U}$'s web browser.
(5) $\mathcal{U}$ clicks on the "New Message" button on the "Messaging $\rightarrow$ Category" page.
(6) $\mathcal{S}$ sends the "Messaging $\rightarrow$ Category $\rightarrow$ New Message" page to $\mathcal{U}$'s web browser.
(7) $\mathcal{U}$ enters a title into the "Title" textbox.
(8) $\mathcal{U}$ enters a message into the "Message" text area.
(9) $\mathcal{U}$ clicks on the "Submit button".
(10) $\mathcal{S}$ adds the newly-created message to the appropriate data store, and sends a "Messaging $\rightarrow$ Category $\rightarrow$ Message" page for the new message to $\mathcal{U}$'s web browser.

(e). **Alternate flow: Aborted submission.** At any time during the main flow, $\mathcal{U}$ can select the "Main" link from the current page. This results in:

(1) $\mathcal{S}$ sends the "Main" page to $\mathcal{U}$'s web browser.

(f). **Alternate flow: Aborted submission 2.** During

(1) $\mathcal{S}$ sends the appropriate "Messaging $\rightarrow$ Category" page to $\mathcal{U}$'s web browser.

(g). **Post-conditions.**

(1) $\mathcal{S}$ must still be on-line and available.
(2) $\mathcal{U}$ must still be logged into the system.
(3) If $\mathcal{U}$ submitted a message, it must be available for viewing by other users in the selected category.
(4) If $\mathcal{U}$ submitted a message, $\mathcal{U}$'s web browser is displaying the corresponding "Messaging $\rightarrow$ Category $\rightarrow$ Message" page for the newly-submitted message.

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[1]See UI mockup for more details.

(5) If $\mathcal{U}$ did not submit a message but selected a category, the appropriate "Messaging $\rightarrow$ Category" page should be displayed in $\mathcal{U}$'s web browser.

(6) If $\mathcal{U}$ did not submit a message and did not select a category, the "Main" page should have been sent as the most recent page to $\mathcal{U}$'s web browser.

4. Interface mock-up

See attached pages.