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6.170

Link Shortener Specification

Link Shortener is a URL shortening service, similar to tinyURL and bit.ly. It supports multiple users. It can be found at http://rahulraj.scripts.mit.edu/workrepo_6170/assignment5/. Users can log in with a username and a password; the passwords are hashed with a randomly generated salt for security. Usernames can be email addresses, but do not have to be, because the application does not send emails to users.

All page transitions/requests to the server are done via AJAX. This provides a smoother experience for users who have JavaScript enabled. (It was not required to support Internet Explorer or users with JavaScript disabled).

After logging in, users are presented with a page listing all URLs that they have shortened and analytics for those URLs. The analytics list all the dates/times when the URLs were visited, and categorizes them into buckets depending on how long ago the visits were. Users can shorten further URLs by filling out text fields at the top to specify which URL to shorten and to what target. The page is updated as URLs are added through AJAX requests.

While it would be possible to log who visited shortened URLs if they are logged in users (by checking sessions), it was decided not to implement this feature. There are privacy concerns – users may not expect the site to track them, and it could cause users to use the site less because this feature would penalize users who stay logged in (but do not want to be tracked).