Alfred Design Documentation

Mayank Sindwani

May 16, 2017

Contents

1 Scoping

1.1 Problem Statement

Online tutorials generally offer step-by-step solutions to accomplishing specific tasks. Users often read and perform steps concurrently as opposed to reviewing the tutorial and following the instructions from memory. As a result, a lot of time is spent context-switching between executing tasks and reading the instructions. Further more, switching between performing and reviewing a step is more difficult to do when the task is physically demanding.

1.2 Purpose Statement

In addition to keeping track of tutorials, a comprehensive interface that lends itself to semi-automated guidance through the tutorial would be beneficial to many users. Ideally the user would have limited physical interaction with the device in order to retain focus on executing an instruction. Alfred aims to present a user interface geared towards a design that maximizes productivity when reviewing and executing a tutorial.

1.3 Stakeholders

Stakeholders include the owner and software developer Mayank Sindwani as well users willing to actively use the application. The owner will facilitate the design and development process while end users will continuously provide feedback during development.

1.4 Constraints

Alfred is subject to the following constraints:

- The software must operate under the functionality constraints of the android platform including limited file system access and memory.
- Resources saved and used by the software must fall within the constraints enforced by the user's operating system and machine.
- The software must not obstruct the methods by which a user may iterate through instructions manually

2 Functional (Atomic) Requirements

Alfred aims to include the following top priority requirements as elicited from stakeholders:

- The system should allow users to perform CRUD operations on tutorials
- The system should accept voice commands to navigate tutorials and instructions

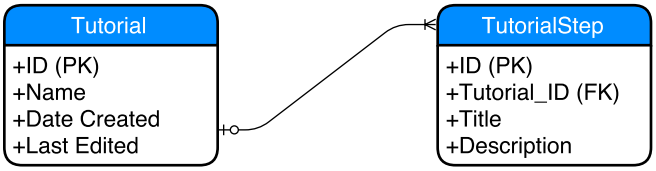
Lower priority items include user preference configurations, export and import features, intelligent space usage, and data analysis.

3 Styleguide

Alfred follows Google's material design guidelines. See the material styleguide for colour scheme and accessibility details. The colour scheme is dark gray as the primary colour and red as the secondary. The text colour on dark gray colours is white while red colours use white text.

4 Data and Storage

Alfred uses a SQLite relational database as part of the built-in Android functionality. The following describes the schema pertaining to the private information persisted on the user's device:



Using the relational database as opposed to binary files offers better performance and granular data extraction better suited for navigating content throughout the application.