

Software Requirements for “Learn by Heart”
Application for recording customized words for study
Author: Lucas Vieira Gama
Class: Software for Smartphones and Cloud Computing (EEL970)
Instructor: Sergio Barbosa Villas Boas (sbVB)
www.sbv.com.br
Institution: Department of Electronics Engineering (DEL)
Polytechnic School (Poli), Federal University of Rio de Janeiro (UFRJ)

Sumário

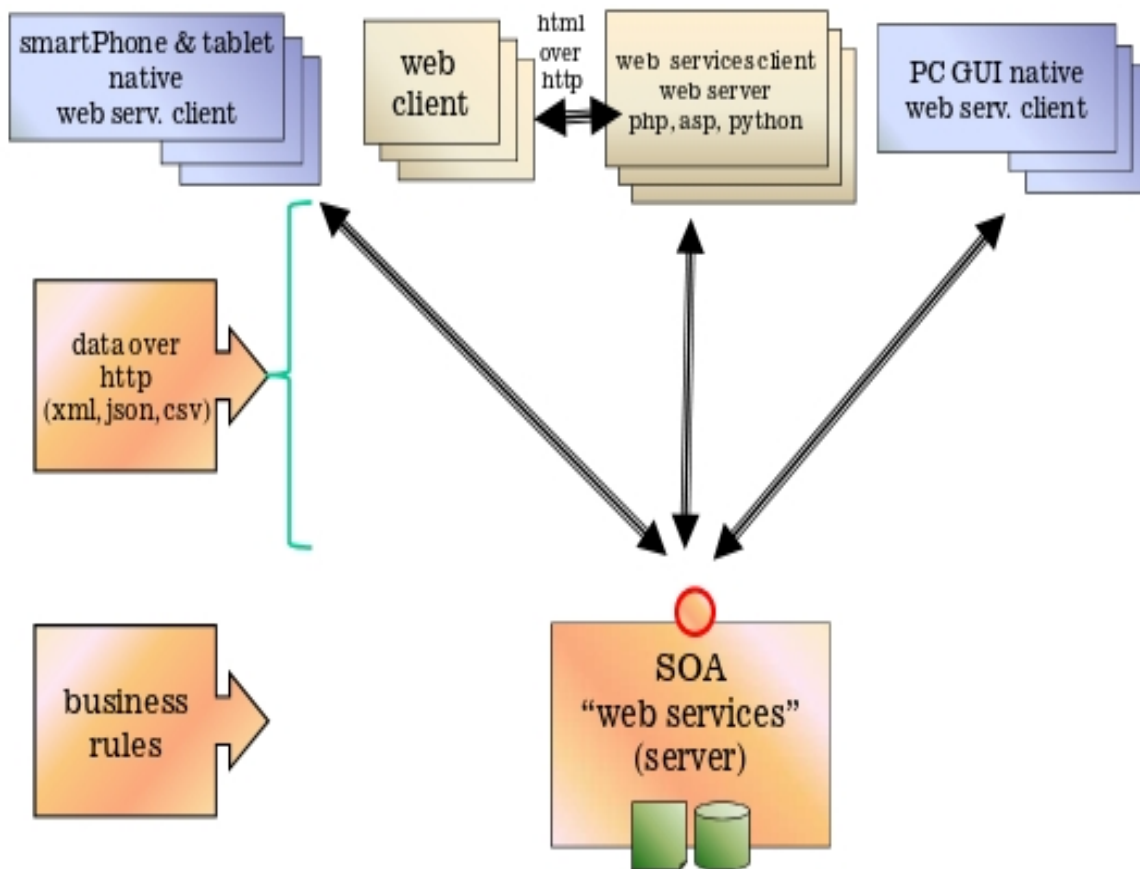
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Introduction

The main idea behind this project rests on the learning process of any language, be it English, Portuguese, Spanish, or any other. For those who are learning on their own, however, there is a certain moment during this process in which the presence of a teacher becomes highly essential, such as when delving into the fundamentals of grammar and spelling. Consequently, in this crucial stage, the learner depends solely on their own efforts. These circumstances allow for a higher probability of failing to recall important words needed to express thoughts and ideas in the language being acquired. The key to solving this problem lies in the expansion and development of vocabulary. Our focus aims at helping to increase the client’s vocabulary by playing games.

Project Presentation

The system will consist of two modules - an Android application and a server - both in communication with each other. This will allow the client to make use of different devices. The client will be able to add words to the system, which may include multiple meanings, each with its own examples. Moreover, the words may be segregated into different groups, or “dictionaries”, for easier access. Currently, there is only one type of user, but new features can be added in the future, such as a web interface.



Source: <http://www.sbv.com.br/proposals/SOA-MC-sbv.com.br.pdf>

Server Requirements

The server must be able to:

- Create new users
- Login/logout users of the system

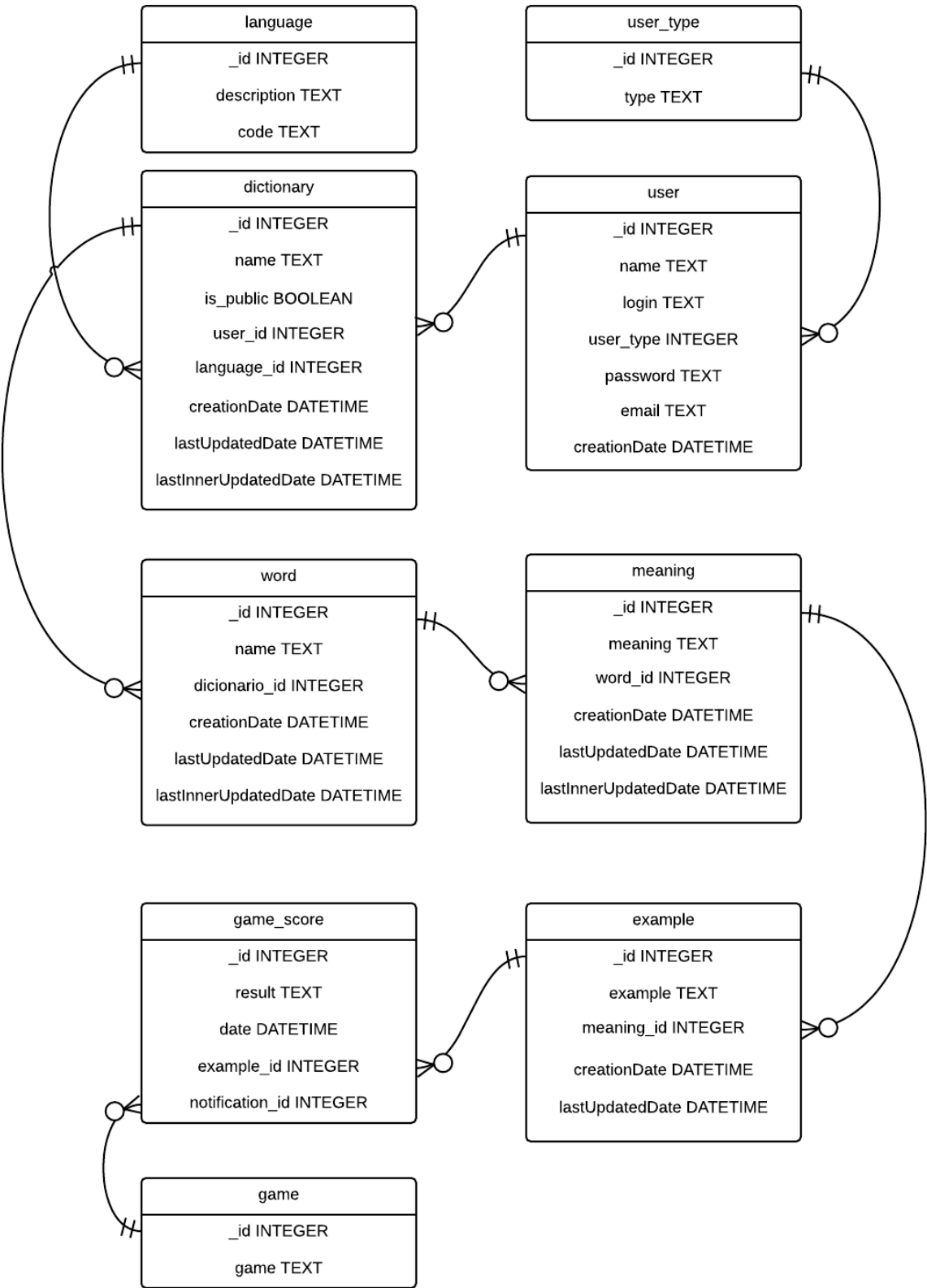
- Synchronize the client's device data

Android Application Requirements

The application must be able to:

- Manage the dictionaries using CRUD functions (create, read, update and delete) for each dictionary, as well as all of the following sub entities: word, meaning and example.
- Login/logout of the system.
- Sign up to the system.
- Synchronize the client's device data.

Entity-Relationship Diagram



Android Application Mockup

Start Screen



1. “Cloud synchronizing” button
2. “Show dictionaries” button
3. “Settings” button
4. “Feedback” button

Login Screen



Sign-up Screen

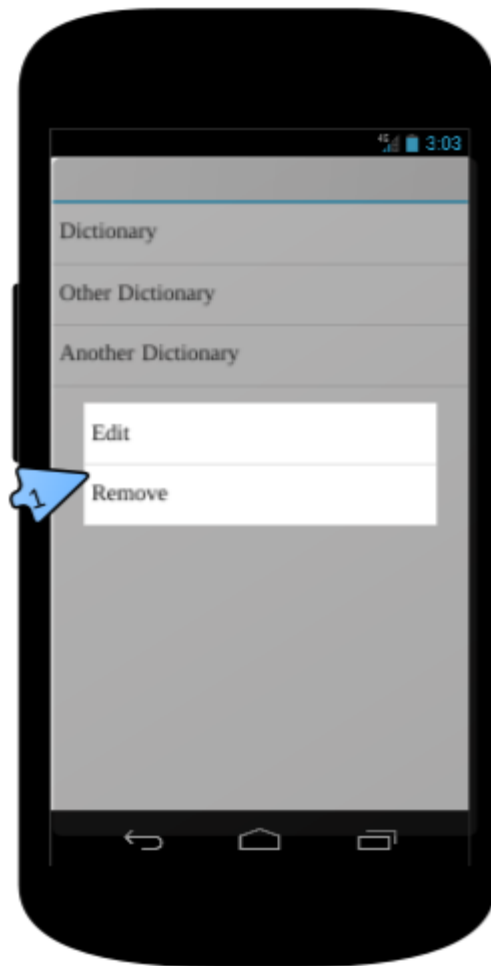
The image shows a mobile application sign-up screen. At the top, there is a status bar with a signal strength indicator, a battery icon, and the time 3:03. Below the status bar is a light gray header bar. The main content area is white and contains four text input fields stacked vertically, each with a placeholder label: "Name", "e-mail", "password", and "repeat password". Below these fields is a gray button with the text "Sign up". At the bottom of the screen is a black navigation bar with three white icons: a back arrow, a home house icon, and a recent apps square icon.

“Show dictionaries” screen



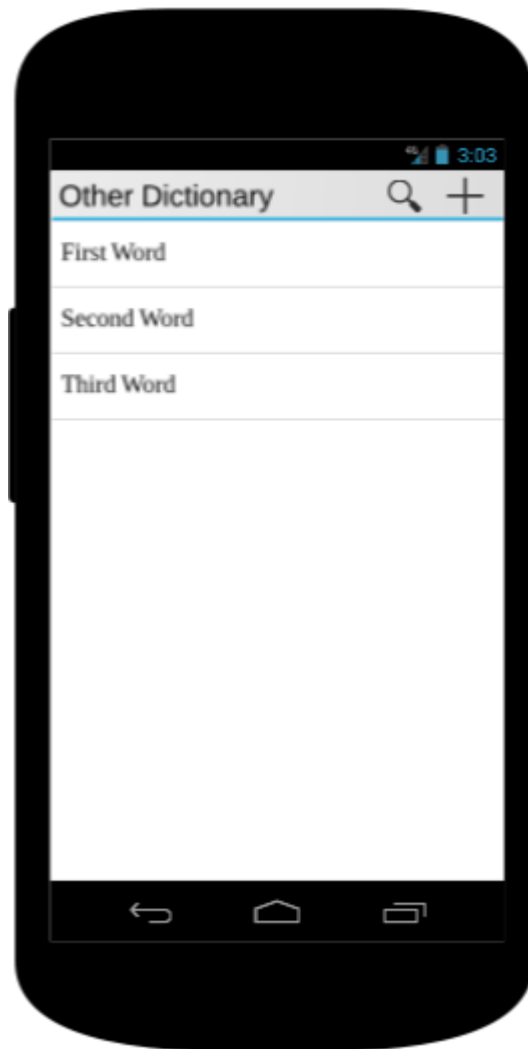
1. “Create dictionary” button
2. There are two events on the list:
 1. Click item: show dictionary words
 2. Press item: show dictionary actions

“Dictionary actions” screen

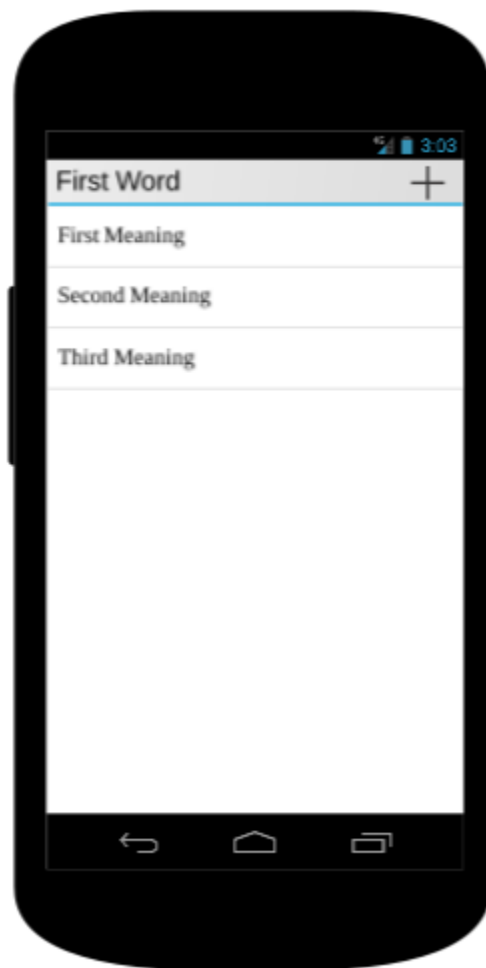


1. Dictionary actions

“Show words” Screen



“Show meanings” Screen



“Show examples” Screen



“Settings” Screen



1. Able/disable games
2. Alter the games' intervals
3. Choose which dictionaries can be played

“Dictionary create/edit” Screen



1. Specify the dictionary's language
2. Define the dictionary as public/private

Tools

- LucidChart:
 - to develop Entity-Relationship model
 - to develop the Android Applications's mockup

Bibliography

Service Oriented Architecture:

<http://www.sbv.com.br/proposals/SOA-MC-sbv.com.br.pdf>