

HIVEMIND



Collaborative, mobile note-taking

What is it?

- Simple, mobile note-taking interface
 - Cross-platform portable
- Less bloated than products like Evernote and mobile office suites
- Free (as in “freedom”) software



How is it used?

- Users add notes to hives
- Hives are used to organize your notes
- Users join hives to gain access to the notes in that hive
- All users can contribute to notes



How'd you do it?

- Cross-platform mobile app developed using Titanium SDK
- Views designed with JavaScript, HTML 5, and CSS 3
- SQLite3 and MySQL backend



Database Structure

- Simple app, yet 2 database requirement
- Implement SQLite structure (well-supported by Titanium) for users and hives
- Implement MySQL database for notes and tags



Database Operation

- Caches user data upon login to reduce number of database queries and improve performance
- MySQL database running remotely talks to app, which itself works directly with the SQLite database



IUD

- Insert, update, and delete statements fully implemented through various features
 - User registration & authentication
 - Checking, editing, deleting, and adding notes



Cursors

- SQLite doesn't support cursors
- MySQL does support cursors



Reports

- Getting the user's Bio
- Notes title on view notes and edit notes
- Hives title
- Notes itself



Stored Procedures

- Implements many stored procedures
 - `litedb.execute('INSERT INTO users (nick, bio) '+ 'VALUES (?)', userDesc.value); //Insert the users nickname and bio`
 - `litedb.execute('UPDATE users SET bio = ? WHERE id = ?', userDesc.value, userValue); //update the user's bio`
 - `litedb.execute('INSERT INTO hives (hiveName) '+ 'VALUES (?)', moreHives.value); //insert the hive name into the hives table.`
 - `litedb.execute('INSERT INTO users (nickname, email, password, bio) '+ 'VALUES (?, ?, ?, ?)', createUserName.value, email.value, hashed_pass, userDescription.value); //inserts the username, email, password and bio into the users table`
 - `INSERT INTO notes (title, content) VALUES ('$takeNotes', '$notesTitle') //inserts the title and content into the notes table (MySQL)`



Technical Issues

- Running emulator build
 - Performance issues
- SDK / API issues
- MySQL + Titanium integration
 - Problems with PHP script
- Required use of IDE



Technical Issues

- Sensitive resultset, not available in javascript through titanium's API methods
- Storing user images and retrieving user images using titanium methods, and Gravatar integration not available for Android in titanium
- Variables not passed through windows located on separate javascript files



Documentation

- User guide (ODT, PDF)
- Installation guide (DOC, PDF)
- In-app help functionality
- ER diagram (DIA, SVG, PNG)
- Flow diagram (ODG, SVG, PNG)
- Wireframes (PNG, PDF)
- README (RST)
 - Contains license and design information



Development

- Titanium IDE
- Vim, Sublime, other text editors
- Titanium SDK with Google APIs
- Git distributed version control software
- LibreOffice and Dia for documentation

