Brno University of Technology
Faculty of Information Technology

Department of Intelligent Systems (DITS) Academic year 2018/2019

Bachelor's Thesis Specification

21548

Student: **Zárybnický Jakub**
Programme: Information Technology
Title: **A Haskell Platform for Creating Progressive Web Applications**
Category: Web
Assignment:

1. Study the current state of the Haskell ecosystem for creating web applications.
2. Find suitable libraries as a starting point for creating Progressive Web Applications (PWAs), i.e., web applications that can offer the user functionality such as working offline or push notifications.
3. Implement a framework for PWAs. Focus, in particular, on the implementation of components for offline storage, push notifications, and also support tools.
4. Create a set of example PWAs that utilise the created framework.
5. Compare the created framework with existing (e.g. JavaScript) frameworks for PWAs.
6. Summarise the obtained results and discuss the future work.

Recommended literature:

- State of the Haskell Ecosystem https://github.com/Gabriel439/post-rfc/blob/master/sotu.md
- the Reflex-DOM library: https://github.com/reflex-frp/reflex-dom
- Bryan O'Sullivan, Don Stewart, and John Goerzen. Real World Haskell. O'Reilly Media, 2008.

Requirements for the first semester:

- First two items of the assignment.

Detailed formal requirements can be found at http://www.fit.vutbr.cz/info/szz/

Supervisor: **Lengál Ondřej, Ing., Ph.D.**
Head of Department: Hanáček Petr, doc. Dr. Ing.
Beginning of work: November 1, 2018
Submission deadline: May 15, 2019
Approval date: November 1, 2018