



## ASSIGNMENT OF BACHELOR'S THESIS

**Title:** RPG game with augmented reality features - server part  
**Student:** Jakub Čech  
**Supervisor:** Ing. Miroslav Balík, Ph.D.  
**Study Programme:** Informatics  
**Study Branch:** Software Engineering  
**Department:** Department of Software Engineering  
**Validity:** Until the end of winter semester 2018/19

### Instructions

The aim of the thesis is to specify, design, and implement a functional prototype of the server part of a RPG game with features of augmented reality (AR).

1. Create a story line and rules for the game. Consider intensive usage of geolocation and AR features.
2. Formalize the following requirements for the implementation of the server part:
  - the data layer consists of a database engine and a caching,
  - users can use their Google accounts to login and play,
  - the server part provides an API,
  - the communication between client and server parts of the application must be secure.
3. Design the server part of the game.
4. Design a suitable front-end part for server administration.
5. Discuss and choose a suitable implementation platform and related technologies (databases etc.).
6. Implement the functional prototype, document it, and perform suitable testing.
7. Tightly cooperate with Tomáš Zahálka who works on the client part.

### References

Will be provided by the supervisor.

Ing. Michal Valenta, Ph.D.  
Head of Department

prof. Ing. Pavel Tvrdík, CSc.  
Dean

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