



THESIS ASSIGNMENT

Name and Surname: Bc. Pavol Repiský
Study programme: Applied Computer Science (Single degree study, master II. deg., full time form)
Field of Study: Computer Science
Type of Thesis: Diploma Thesis
Language of Thesis: English
Secondary language: Slovak

Title: Analysis, Design and Implementation of Micro-frontend Architecture

Annotation: Micro-frontends represents the next logical step in the development of a web-application architecture. However, this approach necessitates an increase in the complexity of the project architecture and development. Issues such as routing, reusability, static asset serving, repository organization, and more are still the subject of considerable discussion, and the community has yet to find any solutions that can effectively bootstrap a project and manage the resulting complexity. While there have been some approaches proposed and discussed, there is a great deal of knowledge and potential for new approaches to be discovered.

Aim: Review existing literature about approaches to design and development of web applications using micro-frontend architecture.
Compare existing approaches from aspects of reusability, extendibility, resource sharing and application state management.
Identify approaches best suited for enterprise application development, then design and implement a prototypical micro-frontend application using one selected approach.

Literature: https://www.researchgate.net/publication/351282486_Micro-frontends_application_of_microservices_to_web_front-ends
<https://www.angulararchitects.io/blog/micro-apps-with-web-components-using-angular-elements/>
<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1570726&dswid=5530>
<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1778834&dswid=-4588>
https://www.scientificbulletin.upb.ro/rev_docs_arhiva/reze1d_965048.pdf

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Assigned: 05.10.2023

Approved: 05.10.2023
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Guarantor of Study Programme



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