

Indicative Comparison of Educational Programs at Universities in the United States and the Czech Republic on a Concrete Example

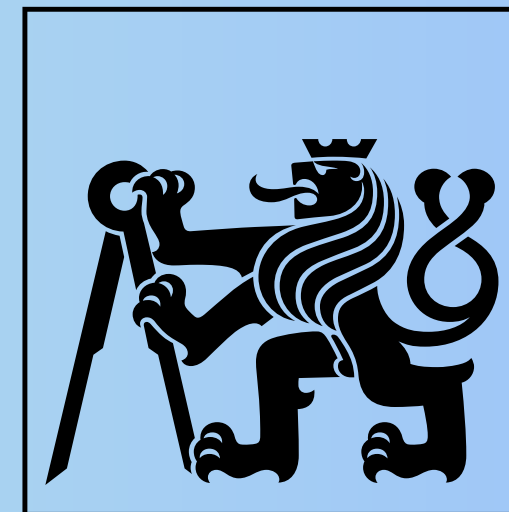
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Study Program: Innovation Project Management



Abstrakt:

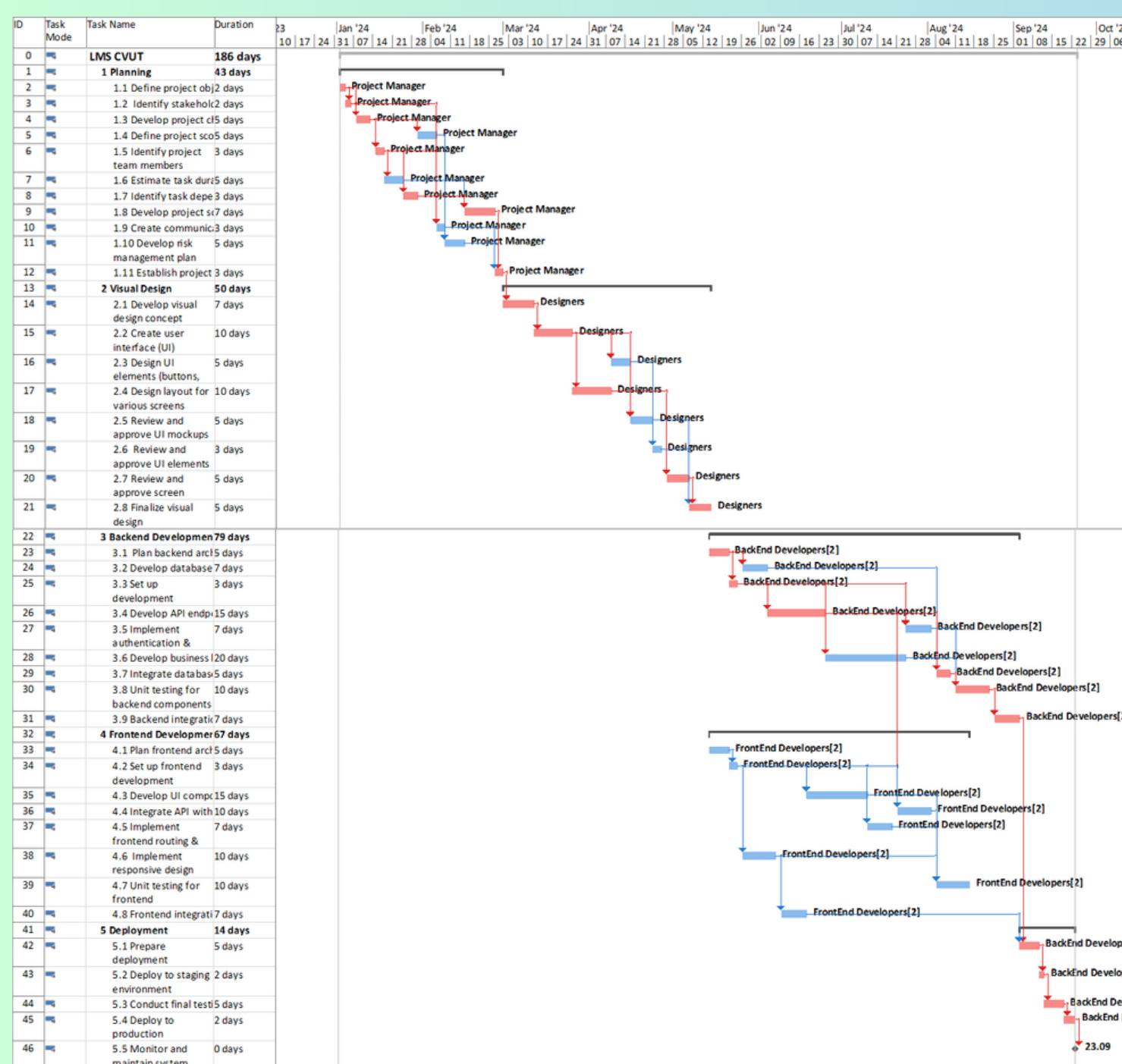
Cílem práce je přispět ke zkvalitnění vysokoškolské výuky na příkladu amerických univerzit s tím, že se DP za měří na problematiku distanční výuky konkrétního studijního programu. Práce bude rozdělena do tří částí: První teoretická část se zaměří na teoretická východiska měření kvality vysokých škol a na aktuální statistiky, vysvětlí základní principy, výhody a rizika vysokoškolské distanční výuky a podstatu webovských aplikací distanční výuky ve světě. Druhá metodická pojmenuje srovnávané university a jejich studijní programy, vybere konkrétní program v České republice a stanoví zadávací specifikaci webové aplikace. Třetí praktická část vytvoří a nastaví výchozí verzi webové aplikace vybraného předmětu v anglickém jazyce, představí a obhájí její funkce ve srovnání s jinými aplikacemi, užívanými ČVUT. Práce bude zpracována v anglickém jazyce.

Abstract:

The aim of the thesis is to contribute to the improvement of university teaching on the example of American universities, focusing on the issue of distance learning of a particular study program. The thesis will be divided into three parts: The first theoretical part will focus on the theoretical bases of measuring the quality of universities and their level of teaching, on current statistics, explaining the basic principles, advantages and risks of university distance learning and the essence of web applications of distance learning in the world. The second methodological part names the compared universities and their study programs, selects a specific study program at CTU and sets out the specification of the web application. The third practical part will create and set the default version of the web application of the selected subject in English, introduce and defend its functions in comparison with other applications used by CTU. The work will be processed in English.

In order to assess the approximate capabilities of the Czech Technical University (CTU) to develop its own Learning Management System (LMS), an estimation of the potential costs and time investment required for the successful completion of this project was conducted. This evaluation took into consideration various factors, such as the required technical infrastructure, human resources and expertise, software development and tests, as well as ongoing maintenance and support.

Gantt Chart

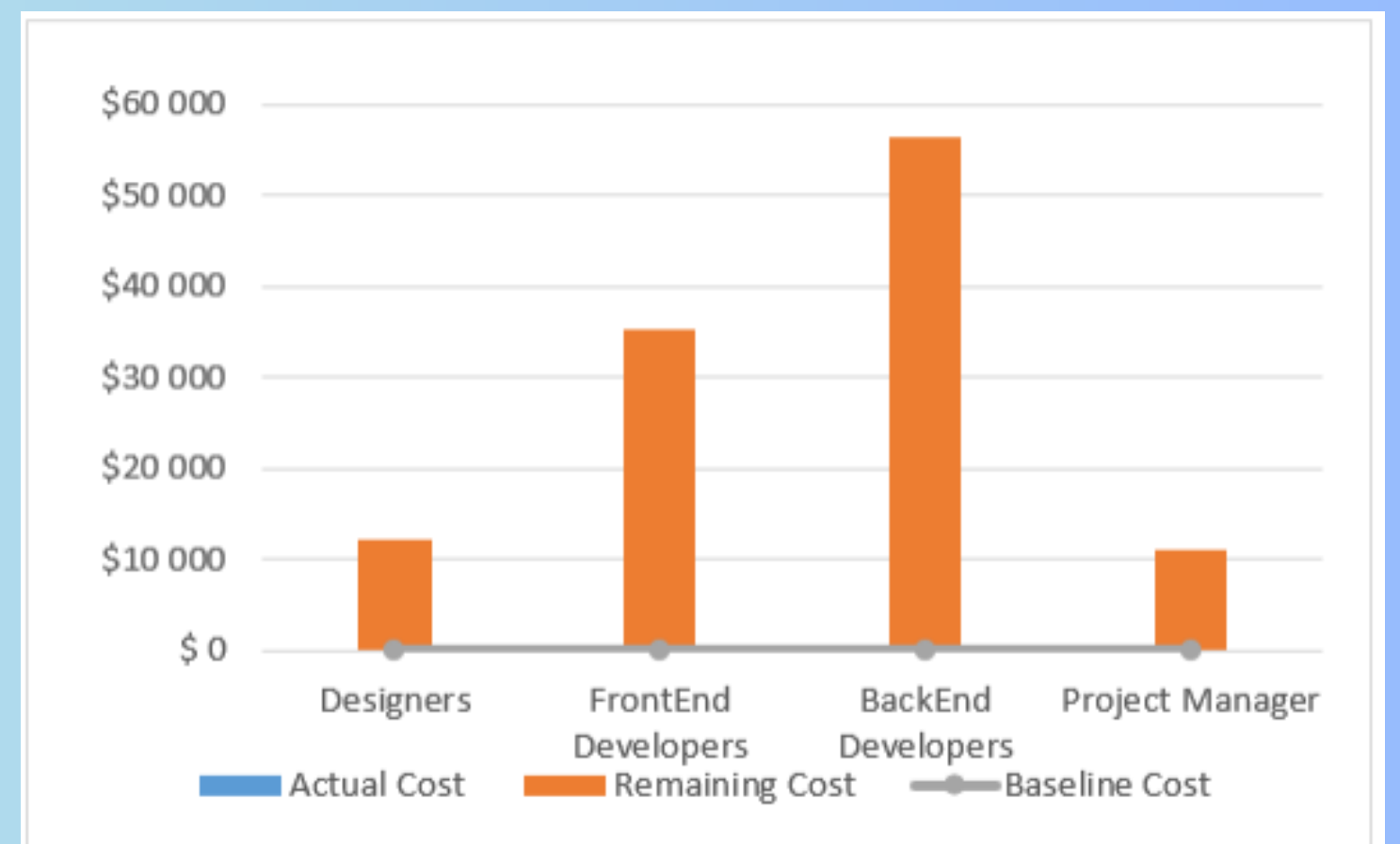


Gantt Chart (Source: own elaboration)

The development process for this project encompasses several key phases, including thorough planning, creative visual design, robust backend development, and engaging frontend development. To expedite the completion of tasks and address potential challenges during the development process, it was decided to hire two specialized experts for each phase of backend development and frontend development. This approach ensures a more efficient workflow, enabling the team to meet deadlines while effectively resolving any non-obvious issues that may arise throughout the development journey.

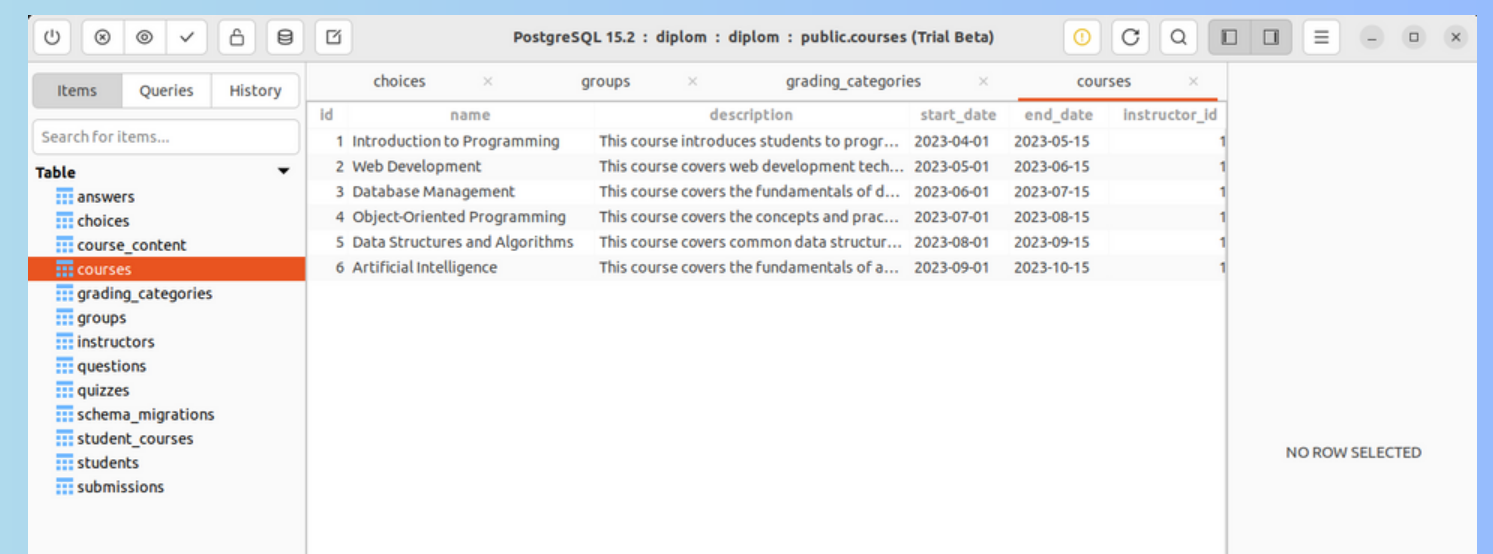
Development team

- Project manager [1];
- Frontend Developers [2];
- Backend Developers [2];
- Designers [1];

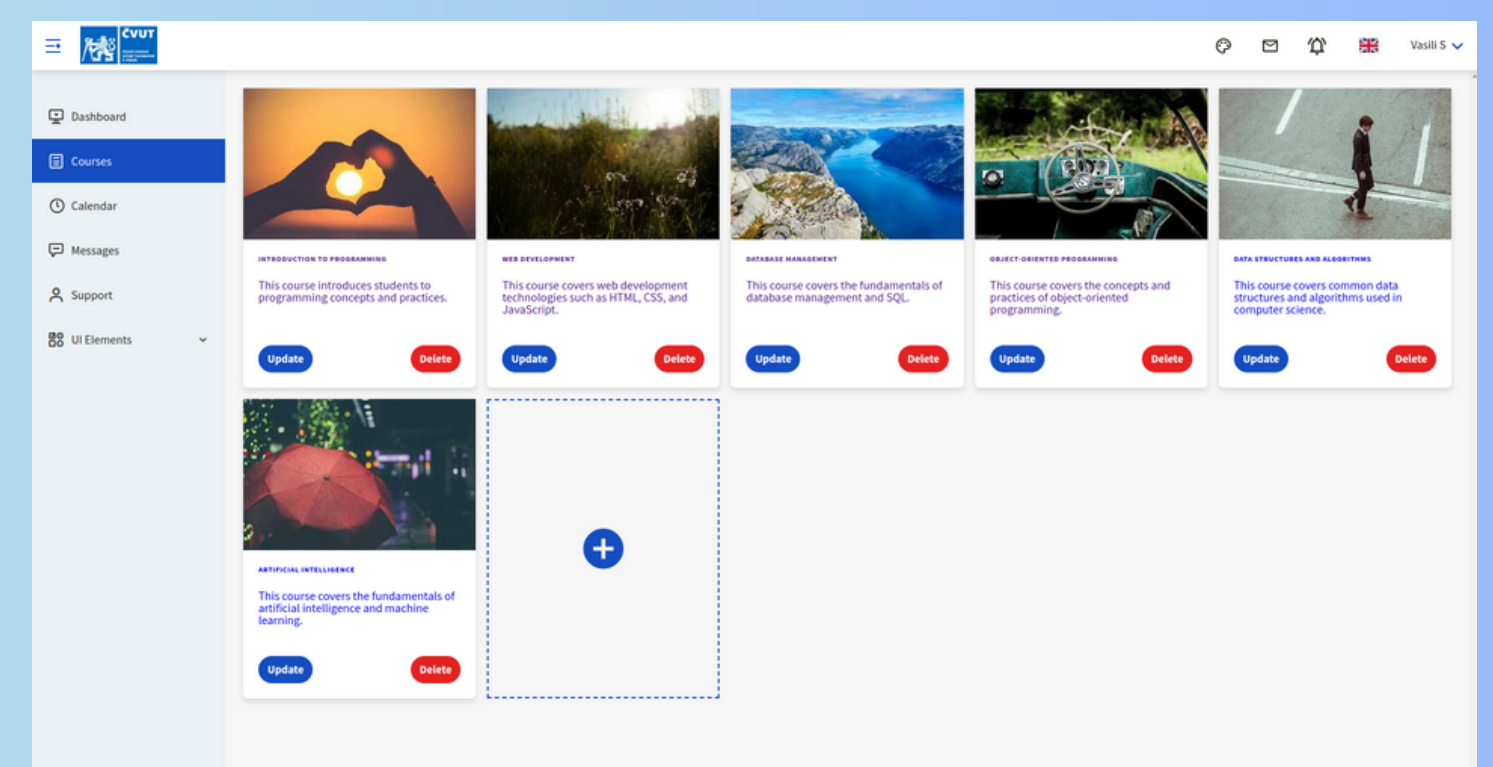


Resource cost overview (Source: own elaboration)

Developing a well-structured database is a crucial stage in the process of creating a Learning Management System (LMS). A thoughtfully designed and efficient database architecture is essential for the seamless functioning and scalability of the LMS. The structure of the database should be intuitive, user-friendly, and easy to comprehend, allowing for streamlined data management and retrieval, as well as seamless integration with other components of the system.



Database structure (Source: own elaboration)



Page of all courses. Teacher view (Source: own elaboration)

The higher education landscape has undergone significant changes, leading to the diversification of university strategies and the development of modern distance education technologies. Addressing challenges such as choosing a platform, managing resources, and ensuring system adaptability is essential in designing an effective distance learning system. The research conducted aimed to develop a web application to enhance the quality of educational services. The global Internet provides a suitable communication environment for distance learning, and the created learning management system serves as an initial step in integrating modern technologies into education. Future work should consider the specific requirements of higher education institutions, such as incorporating video communication technologies.

Literature

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