
Django Python Framework로 교육용 웹 사이트 업그레이드

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Upgrading Educational Website with Django Python Framework

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ABSTRACT

Every year thousands of students make a decision that will have a significant impact to the rest of their lives. They select what college or university to attend, and this decision may affect their career, earnings, and professional development in future. In order to select a university, students search information about universities and for this, they refer to the universities' websites. Therefore, it is important for each university to have a well-designed and informative website with proper usability and accessibility. One of the educational university websites with an attractive user interface is the NamSU.uz (Namangan State University, Uzbekistan). However, it has a lot of bugs like lack of coding accuracy, unclickable navigation bar buttons, and a lack of flexibility in the database. In this paper we introduce an upgrade of the official website of Namangan State University with new functionalities, popular programming languages, and libraries.

키워드

website upgrade, Django, educational website

I . Introduction

In today's highly developed academic societies, universities should have official websites. Because the official website is a good place to start looking for information about a university. It helps potential students to search for information about university departments, curriculums, new developments on campus, interesting researches, and campus life. In short, official websites generally allow users to take a virtual tour of the campus.

In order to attract students, universities need to make sure the content on their websites is up-to-date and enables students to get the information they need to see themselves becoming a student at the university [1].

There are a lot of university websites all over the world. In most cases, the websites cover university news, important documents, and information about majors and departments that students can use. However, the official website of Namangan State University has difficult and complicated user interface elements to use

[2]. Therefore, we try to update and increase user interface satisfaction of the official website with the simple user interface (UI), high-level programming languages, popular web frameworks, and libraries as shown in Figure 1. In addition to this, updated university website populates database with exceedingly scalable Python programming language framework, Django.

II . Method

In Figure 2, we illustrate the tools (frameworks and libraries) we used in order to match our website to be secure and to have a well-designed user interface (UI).

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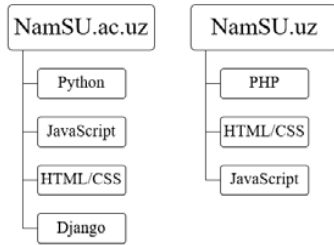


Figure 1. Comparison of programming languages used in upgraded and original websites

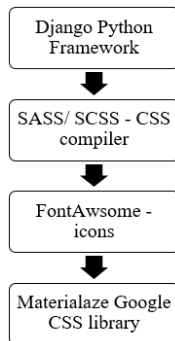


Figure 2. Frameworks and libraries

While our suggested new (upgraded) website has a lot of new features like contact form, clickable buttons, high privacy, and security, NamSU.ac.uz is mainly based on information from the official website. That's why it is called NamSU.ac.uz.

In order to upgrade the website, we chose the Django Framework, HTML/CSS, SASS, JavaScript, and Materialize. While developing this project, we mainly used Django Framework [3]. Django allows to build better Web apps more quickly and with less code. It is ridiculously fast, reassuringly secure, and exceedingly scalable. It also gives a chance to set up middleware to respond to HTTP requests and can render HTML pages dynamically based on passing arguments to templates.

One of the most popular CSS open-source libraries to design website interface is Materialize Google library [4] with forms, icons, components, and showcases. For this reason, we decided to use the Materialize CSS library and SASS programming language [5] to improve coding accuracy.

Figure 3 illustrates what a user can see when visiting the NamSU.ac.uz website, a total of seven pages:

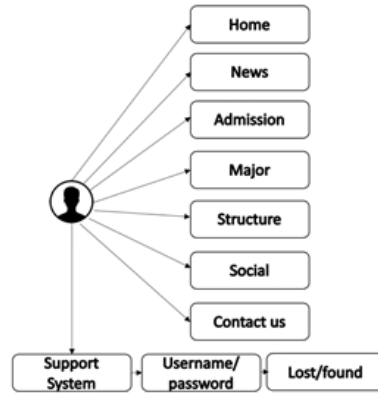


Figure 3. Connection between a user and website

The database of the website was powered by the Django Admin page (supported with SQLite). One of the most powerful parts of Django is the automatic admin interface which reads metadata from models to provide a quick, model-centric interface where trusted users can manage content on-site [3].

III. Conclusion

NamSU.ac.uz is an updated version of the Namangan State University official page (NamSU.uz). The purpose of updating the current website is to improve the official web pages with the latest frameworks, libraries, packages, and programming languages and making the website easy to interact with any user without any difficulties.

References

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