THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH

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WEB SERVICE FOR CREATING AND CONSTRUCTING WEB PAGES

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Abstact: The article focuses on the development of a web service in Python designed to simplify the creation and customization of web pages through an intuitive interface. The service features functionality for creating, editing, and deleting page elements, as well as for constructing multi-page websites. The outcome is a streamlined process for web page creation, reduced time expenditure, and increased accessibility of web technologies for a broad range of users.

Keywords: Constructor, web page, website, information technology, programming language.

Website is an information unit on the Internet, a resource of web pages (documents) that are united by a common topic and linked to each other using links [1]. Websites are aimed at reducing the labor intensity of searching, processing and presenting information.

The development of modern society is incredibly dynamic, and one of the main reasons for this is the rapid development of web technologies. With the advent of the Internet, many problems began to be solved online. Websites and Internet platforms that have recently entered our lives are becoming increasingly popular. Their main advantage is the ability to quickly access and exchange information, which makes it relevant to create various web applications and services.

A web page is a document or information resource on the Internet with its own unique URL [2]. The importance of such web pages is that they are designed to make many tasks easier.

Currently, websites are a tool for achieving completely different goals, for example, providing information about a company and its products.

However, creating such pages and sites can be a labor-intensive process. A web service for creating and designing web pages will help save time and resources when creating and updating such pages.

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The purpose of the web service being developed is to help any user without programming skills create their own web page.

After developing the designer, users will be able to quickly and easily create a web page and personalize it to their own requirements/desires, and then export the result.

The interface is one-page and created using Streamlit, which ensures its stable operation (Figure 1).

Streamlit is a web framework designed for data scientists to easily deploy models and visualizations using Python [3].

The web service provides the user with a designer with a convenient workspace that consists of four areas: an area for creating elements, selecting the necessary elements for editing or deleting, a space for displaying the page being created, the page being created, an area for filling in the parameters of the elements (Figure 2).

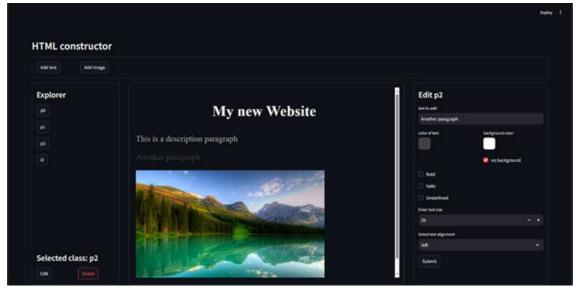


Figure 1. Example of a web constructor working



Figure 2. Workspace areas

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To implement the web service, a number of functions have been developed, the main ones of which perform the following actions.

The find_classes(page) function takes a string, which is the HTML code of the page being created, and returns an array of classes contained on the page.

The get_class_params(page, edited_class) function takes the page code, in the form of a string, and the class that the user is going to edit. The function fills out a form that contains information about the element's parameters for more convenient editing.

The get_html(page, edited_class) function takes the page code, in the form of a string, and the class that the user is going to edit. The function returns the HTML and CSS code of the desired element for later modification.

The Save(page) function saves the update

The last one to display is the interface, which receives data from the functions and displays all the necessary information.

Project development prospects:

expanding the number of parameters to create more diverse elements;

adding more different elements to diversify the page and increase its functionality;

improving algorithms for more convenient web page design; creation of tools for creating multi-page websites.

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