



СОВРЕМЕННЫЕ ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ

Прикладные программно-аппаратные системы

D. P. Shevchuk, O. G. Bakunova
(GSU F. Skaryna, Gomel)

DEVELOPMENT OF WEB-SERVICE VIA ASP.NET WEB API

Разработанная система использует REST - сервисы и предназначена для автоматизации рабочего места работников кадровой службы Пожарного аварийно-спасательного отряда Гомельского областного управления МЧС.

A workplace automatization is one of the actual technical issues. Office employees have to process big volume of data from different informational streams and it needs to be fast. Software developed for hospitals, communal services, educational establishments etc. is called to solve the issue.

These systems as a rule present the possibility to account human resources, working activity of employees, gathering statistics and analyze these metrics. Usually generating of reports and some documents is deployed into similar systems for reducing time of their forming.

The one of many variants of such systems implementation is a web-application. Usually it means a three-level architecture (client, web-service, database) that makes the system more scalable and flexible.

Web API is based on the REST (Representational State Transfer) architecture, which in turn is superstructure on the HTTP, it means that the following methods are used for interaction with a server: GET, POST, PUT, DELETE.

Seven controllers have been implemented at the project. Each controller contains methods for interacting with special data. There are unique routes for each methods and every controller was specified by a special section.

Security also is a very important thing in the web-service development. Since the service has been implemented with OWIN, OAuth2 was used for authorization implementation.

Open Web Interface for .NET (OWIN) defines an abstraction between .NET web servers and web applications. OWIN decouples the web application from the server, which makes OWIN ideal for self-hosting a web application in your own process, outside of IIS.

Материалы XX Республиканской научной конференции студентов и аспирантов «Новые математические методы и компьютерные технологии в проектировании, производстве и научных исследованиях», Гомель, 20–22 марта 2017 г.

Using OAuth means that a client sends his credentials to the server, which authenticates the user, generates a bearer token (it is presented as a string in a base64 format) and gives it to the client. The client sends the token with each request to the server that could see whether the user has access to resources.

The developed service presents a possibility to interact with data about activity of employees of the fire rescue squad emergency department of the Gomel region. It gives a possibility to create many client apps, which will interact with the single database through the service.