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WEB-TECHNOLOGIES ANALYSIS FOR CREATING AN ONLINE SITE OF BLENDED LEARNING IN COMPUTER SCIENCE.

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Modern technologies for creating and maintaining Web sites are focused on platforms that allow effective content management and data coming from visitors to the site. As a rule, such solutions are based on server technologies such as ASP, ASP.NET, JSP, PHP or use powerful ready-made tools for creating corporate websites, focused on the implementation of these technologies. Let's take a closer look at popular information technologies. Creating web pages from fragments of server code is a technology ASP, ASP.NET (Active Server Pages). This is a commercially available technology developed by Microsoft with which the webmaster can create dynamically updating web pages on his own. A characteristic feature of this technology is the ability to separate the functional part of development from the design creation.

JSP technology (Java Server Pages) is a technology for creating Java server pages. The JSP specification is an extension of the Java Servlet API for creating dynamic web pages on a web server. This cross-platform is an alternative to Microsoft's ASP technology. Sun specification called JSF (Java Server Faces) implements JSP technology, which describes the rules of creating web applications with user-friendly interface and focuses on the development of server-side components of the interface. One of the first technologies to create server-executed web applications was Common Gateway Interface (CGI) technology. It allowed for the development and execution of server applications accessed by the name (and parameters) specified in the URL. Depending on the chosen protocol, incoming information of such web applications is considered to be directly an HTTP header code or a search engine request. CGI applications are console applications that generate HTML code sent to the browser.

Among other popular technologies implementing the creation of web pages with fragments of code executed on the server, we should highlight the non-commercial freeware technology PHP (Personal Home Pages). This technology is based on the use of CGI-applications that interprets embedded in HTML-page code in scripting language. The main feature of PHP language is its practicality. NRC provides the programmer a tool for fast and efficient tasks solution. It is extremely flexible to the needs of the developer. Although RNR is traditionally recommended for use in conjunction with HTML-code, but RNR can just as well be integrated into JavaScript, WML, XML and other Internet programming languages. The considered technologies provide modern functionality, effective processes support of sites creation and filling of information resources.

The results of the analysis allow us to conclude that there are advantages of performance characteristics of PHP-technology. The main advantages of PHP, as we see, are practicality, efficiency, performance and flexibility. PHP frameworks have recently gained popularity and became the basic platform for the web applications development. Using these systems can save a lot of time, reduce the burden on the development process by eliminating the problem of repetitive code, and quickly create quality applications. Meanwhile, the use of PHP frameworks makes the process of creating a program much easier and more functional.

Based on the above analysis, the Yii2 framework is better suited for solving the tasks of the mentioned type. This system is perfectly tuned for the projects of such complexity; it does

not require additional configuration, has built-in support of multilingualism, is user-friendly, and provides a high level of security for the products developed with it. Also, for the system development you need to use markup language HTML5 and cascading style sheet CSS3. This is the best and most convenient tools with a similar purpose. They allow you to build Web-pages with a variety of sizes and shapes. The programming language java script uses for interactive and active user interaction with the web application.

Java script is a dynamic, object-oriented programming language. It is an implementation of ECMAScript most often used as part of the browser that allows the code to run on the client side, thus removing the burden on the main server, which runs the basic functionality of the system. This language can also be used for server-side programming, game development, fixed and mobile applications, scripting in applications, inside PDF documents, etc. JavaScript is classified as a prototype (a subset of object-oriented), scripting programming language with dynamic typing. Besides prototypical JavaScript also partially supports other programming paradigms (imperative and partially functional) and some related architectural features, in particular: dynamic and weak typing, automatic memory management, prototype mimicking, functions as first-class objects. Given the identified advantages and disadvantages of the analyzed tools for creating web applications designed to keep statistics, the following technologies are best suited: YII2, Java Script, HTML5 and CSS3.

References:

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