УДК 621.311

MODERN PROGRAMMING LANGUAGES

Dubodelov A.V., Shemetov Y.A., Vanik I.Y.
Supervisor– Ivanchenko V.V.

Today we looked at 4 popular programming languages, described their advantages and disadvantages, gave a brief description of each of them, and also compared their relevance in the world and in Belarus.

First language is Python. Python was developed by Netherlandish programmer Guido Van Rossum in 1991. Now Python is taking leading position among programming languages. It is located on the 5th position in Belarusian rating. Python has already been at the top of user growth for several years. Python is a multi-paradigm programming language. Python uses dynamic typing, and a combination of reference counting and a cycle-detecting garbage collector for memory management. The syntax of this language is very simple. However, the most important direction for Python is machine learning. Machine learning technologies are used in recommendatory services (recall, for example, YouTube, Amazon and Netflix), in face and voice recognition systems. EPAM, IBA group and Belhard use this language in our country. Python has some advantages: a large user community, easy to code and read, free and open-source and etc.

The second is C#. It was developed by Microsoft. Anders Hejlsberg created the language in 1999. What about C# rating today, if we consider the rating from GitHub, we will see that C# located on the 8 place. It is a multiparadigm programming language encompassing strong typing, imperative, declarative, functional, generic, object-oriented, and component-oriented programming disciplines. C# is one of the most popular programming languages in many IT companies, such as EPAM, Itransition, ISsoft, SaM Solutions. This language has some advantages: you don't need to write destructors in C#, the .net class library will allow for rapid prototype development and others.

The third language in our research is Ruby. Ruby was created by the Japanese developer Yukihiro Matsumoto in 1995. In the Belarusian top programming languages, it takes the 7th position. Ruby is object-oriented: every value is an object, including classes and instances of types. Ruby has been described as a multi-paradigm programming language with dynamic typing, and supports parametric polymorphism. Ruby was influenced by Perl, Smalltalk, Eiffel, Ada and Python. Ruby is used by NASA, NOAA (National Oceanic and

Atmospheric Administration), Oxagile, EPAM, Itransition. This language also has some advantages: it has options for test automation, it is a full-stack framework that covers both front and back-end design, incredibly productive.

The fourth is PHP.PHP is created by RasmusLerdorf in 1994. PHP is located on the 5th position in GitHub rating and 4th position in Belarusian top programming language. It is a server side scripting language. Basically PHP is used in web development and you can say that web application and website development. According to Netcraft's survey 39% (244M) of website are running PHP. Such well-known IT companies of Belarus as IBA, Itransition, "BelHard", OxagileSaM Solutions write programs with the help of PHP. PHP has some advantages for example: speed, open source and powerful library and ease of use.

Литература

1) Wikipedia – The Free Encyclopedia[E-resource] / Python (programming language). – Access mode: en.wikipedia.org/wiki/Python_(programming_ language).
2) Wikipedia – The Free Encyclopedia [E-resource] / Ruby (programming language). – Access mode: en.wikipedia.org/wiki/Ruby_(programming_ language).
3) Medium [E-resource] / Advantages and Disadvantages of Python Programming Language. – Access mode: medium.com/@mindfiresolutions.usa/advantages-and-disadvantages-of-python-programming-language-fd0b394f2121.
4) LEDU – Education Ecosystem [E-resource] / Introduction of C# Programming Language. – Access mode: www.education-ecosystem.com/guides/programming/csharp-dotnet/history/.
5) OmkarSoft – Deep rooted thought [E-resource] / Top 5 Advantages and Disadvan-tages of PHP Framework. – Access mode: www.omkarsoft.com/blog/top-5-advanta-ges-disadvantages-php-framework/.
6)pTutorial – New way to learn PHP [E-resource] / History of PHP. – Access mode: www.ptutorial.com/php-tutorial/history-of-php.
7) pTutorial – New way to learn PHP [E-resource] / History of PHP. – Access mode: www.ptutorial.com/php-tutorial/history-of-php.
8) Портал dev.by – медиаоб ИТ-индустриив Беларусии мире [Электронныйресурс] / Самые востребованные языки программированияв крупнейшихИТ-компанияхБеларуси – Режимдоступ: dev.by/news/samye-vostrebovannye-yazyki-programmirovaniya-v-belarusi.