



Студенттер мен жас ғалымдардың
«ҒЫЛЫМ ЖӘНЕ БІЛІМ - 2018»
XIII Халықаралық ғылыми конференциясы

СБОРНИК МАТЕРИАЛОВ

XIII Международная научная конференция
студентов и молодых ученых
«НАУКА И ОБРАЗОВАНИЕ - 2018»

The XIII International Scientific Conference
for Students and Young Scientists
«SCIENCE AND EDUCATION - 2018»



12th April 2018, Astana

**ҚАЗАҚСТАН РЕСПУБЛИКАСЫ БІЛІМ ЖӘНЕ ҒЫЛЫМ МИНИСТРЛІГІ
Л.Н. ГУМИЛЕВ АТЫНДАҒЫ ЕУРАЗИЯ ҰЛТТЫҚ УНИВЕРСИТЕТІ**

**Студенттер мен жас ғалымдардың
«Ғылым және білім - 2018»
атты XIII Халықаралық ғылыми конференциясының
БАЯНДАМАЛАР ЖИНАҒЫ**

**СБОРНИК МАТЕРИАЛОВ
XIII Международной научной конференции
студентов и молодых ученых
«Наука и образование - 2018»**

**PROCEEDINGS
of the XIII International Scientific Conference
for students and young scholars
«Science and education - 2018»**

2018 жыл 12 сәуір

Астана

УДК 378

ББК 74.58

Ғ 96

Ғ 96

«Ғылым және білім – 2018» атты студенттер мен жас ғалымдардың XIII Халықаралық ғылыми конференциясы = XIII Международная научная конференция студентов и молодых ученых «Наука и образование - 2018» = The XIII International Scientific Conference for students and young scholars «Science and education - 2018». – Астана: <http://www.enu.kz/ru/nauka/nauka-i-obrazovanie/>, 2018. – 7513 стр. (қазақша, орысша, ағылшынша).

ISBN 978-9965-31-997-6

Жинаққа студенттердің, магистранттардың, докторанттардың және жас ғалымдардың жаратылыстану-техникалық және гуманитарлық ғылымдардың өзекті мәселелері бойынша баяндамалары енгізілген.

The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

В сборник вошли доклады студентов, магистрантов, докторантов и молодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

УДК 378

ББК 74.58

ISBN 978-9965-31-997-6

©Л.Н. Гумилев атындағы Еуразия
ұлттық университеті, 2018

References:

1. Вундт Вильгельм. Большая советская энциклопедия: [в 30 т.] // под ред. А. М. Прохоров — 3-е изд. — М.: Советская энциклопедия, 1969.
2. Мышко С.А. Проблема тестирования в системе образования США. Дисс...к.п.н.- Ужгород, 1982
3. Костюк Г.С. О зависимости результатов тестирования от формы теста // Тесты: теория и практика-М.: Моск. тестолог. объединение, 1928 г. -205с.

ANALYSIS OF CONTEMPORARY LANGUAGES OF PROGRAMMING

Omarov Dauren Tanatovich

2nd course master students of Computer science

L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

Scientific adviser - Alzhanov A.K.

The technology of programming does not stand still and constantly develops taking into account new needs in the field of IT-technologies. There are two main requirements for programming languages: their proximity to the usual professional language of a certain field of activity and ease of implementation. Contradictory requirements stimulate the continuous process of creating new languages and finalizing existing ones.

The programming language is a notation system for describing algorithms and data structures, a definite artificial formal system, by means of which it is possible to express algorithms.

At present, the number of programming languages is updated annually. To date, more than two and a half thousand programming languages are known. Below are considered some of the most advanced programming languages, each of which solves its specific work.

The language Dart, developed by Google, as one of the languages of web programming.

As in JavaScript, Dart uses syntaxes and keywords similar to those used in the C language. However, one significant difference is that while JavaScript is based on prototypes, objects in Dart are defined using classes and interfaces, as in C ++ or Java.

The idea of its creation is based on making the language as familiar, flexible and dynamic as JavaScript. But so far, that this language is very few possible to use because it is designed to run on the client, or on the server.

The next new programming language developed by Google is Go. This general-purpose language is designed for easy programming, suitable for everything from application development to system programming.

The language is more like C or C ++ than Java or C #. However, like the last languages, Go includes such advanced functions as clearing memory of unnecessary data, reflecting current execution processes and supporting parallelism.

In the Go language, the concepts of classes, constructors and destructors are completely absent. However, there are structures borrowed from the C language, to which functions can be linked, in this connection, in the Go language, programs based on object-oriented programming can be created. Having a function to clear memory from unnecessary data simplifies the work, in comparison with C and C ++. The Go language is still in development, but nevertheless you can already work with it.

Web programming is complicated by the fact that for the client, server, databases, etc., their individual programming languages. Engineers developed a new language for Opa. This language is created with the idea of linking the user interface, the server logic and the I / O database. The compiler independently decides where the program is running and executes the written code.

The Opa runtime combines its own web server and database management system, which can not be replaced with stand-alone alternatives. Opa comes free of charge and is currently available for 64-bit Linux and Mac OS X platforms, while other ports are being developed.

On the other hand, each language has its own drawbacks, which set the system created in this language less secure.

To solve this problem, scientists have found a way to protect one that protects both websites and users' computers by developing a system that allows using several programming languages when creating one program.

The Wyvern system is something like a compiler for a single metalanguage, which includes all the known and popular programming languages. This system allows programmers to develop web pages and applications using directly all the features of C, PHP, HTML, CSS, JavaScript and other languages and avoiding the need to use some artificial tricks that are sources of potential danger.

This system is not the only one, examples of such programs are Scheme, ProteaJ, Spoofox and OJ. They also solve the above tasks.

In the continuation of the topic, a new programming language Sketch was developed. The peculiarity of the language is that it allows you to omit some parts of the code when writing programs, independently filling these intervals, optimizing the results.

The basic idea, implemented as a Sketch compiler, is the method of finding the optimal solution for a specific task. It is known that any logical and mathematical problem can be solved in several ways, the number of which in some cases may tend to infinity.

Another new programming language was the Wolfram Alpha language.

Wolfram Language is a language based on an extensive knowledge base with which you can create fairly complex applications without resorting to the traditional programming process. Wolfram Language is a language based on a huge knowledge base, which contains all the typical computing operations.

SQL is the "structured query language" used to create, modify, and manage data in an arbitrary relational database managed by the appropriate database. Database technologies (MySQL, PostgreSQL and Microsoft SQL Server) are used by international corporations and small businesses and government agencies. In fact, almost every computer and person with access to technology ultimately comes into contact with SQL. For example, all Android smartphones and iPhones have access to the SQLite database, and many of the most popular mobile applications developed by Google, Skype or Dropbox use it.

One of the most important role in the development of Swift was influenced by such programming languages as Ruby and Python. It is considered user-friendly and interesting to use. Swift is a high-level multi-paradigm language developed by Apple for iOS. If working with Apple products is your goal, then this is the language for you.

Swift is a statically typed language. This means that Xcode checks your errors for you, so it's easier to keep track of them. The systems for evaluating the popularity of the language is TIOBE, the essence of which is counting the number of web pages that have a name for one or the other.

However, this does not always indicate how many people are really in this state when the GitHub team approached this problem from the other side.

Their system called PYPL (PopularitY of Programming Languages) is based on the number of search queries for teaching aids: the more people search for recommendations on a specific programming language, the higher it is in the PYPL ranking.

The most used technologies and programming languages:

1. JavaScript - 55,4%.
2. SQL - 49,1%.
3. Java - 36.3%.
4. C # - 30,9%.
5. PHP - 25.9%.

6. Python - 24.9%.
7. C ++ - 19.4%.
8. AngularJS - 17,9% (JavaScript framework).
9. Node.js - 17,2% (server technology JavaScript).
10. C is 15.5%.

Having examined modern programming languages, some of which are being introduced in programming, some are still being finalized, one can conclude that at the present time, with a base of two and a half thousand programming languages, there is not one universal. While this task is not worth it, so at this stage it is possible to single out the Wyvern system, a system that allows using several different programming languages when creating one program. It can be assumed that at least one of the languages in question will replace the popular programming languages in the future.

References:

1. Programming languages [Electronic resource].URL: <http://life-prog.ru>
2. McALLISTER N. InfoWorld. "10 programming languages that can turn the world of IT" // Computer news [Electronic resource]. URL: <http://www.kv.by/content/325498-10-yazykovprogrammirovaniya-kotorye-mogut-perevernut-mir-it>
3. Wyvern - a new system that allows to use several different programming languages when creating one program // DailyTechInfo [Electronic resource].URL: <http://www.dailytechinfo.org/infotech/pri-sozdanii-odnoy-programmy.html>
4. Sketch - a new programming language that can independently optimize and complete unfinished code sections //DailyTechInfo [Electronic resource]. URL: <http://www.dailytechinfo.org/infotech/nezakonchennye-uchastki-koda.html>
5. Language Wolfram Alpha - a revolution in programming // DailyTechInfo [Electronic resource].URL: <http://www.dailytechinfo.org/infotech/5709-yazyk-wolfram-alpha-revolyuciya-voblasti-programmirovaniya.html>

ӘОЖ 004

САНДЫҚ БІЛІМ БЕРУ ОРТАСЫНДАҒЫ ОҚУ ҮРДІСІН ТРАСФОРМАЦИЯЛАУ

Алимбекова Н.А.¹, Абдикаримова С.К.²

Л.Н. Гумилев атындағы ЕҰУ, Информатика кафедрасы оқытушысы
АҚ «Қаржы академиясы» колледжінің ЦҚ «Есептеу техникасы және Ақпараттық технологиялар» кафедрасы оқытушысы

Аңдатпа. Мақалада білім беру үдерісін АКТ-ны тереңдететін білім беру ортасына табысты трансформациялау үшін жағдай қарастырылады. Бүгінде білім беруді ақпараттандыру білім беру үдерісін трансформациялау жұмысына айналды. Ақпараттандыру трансформациясы білім беру мекемесінің жұмысын сапалы түрде өзгертетін жүйелі өзгерістер ретінде қарастырылуы мүмкін.

Түйінді сөздер: білім трансформациясы, ақпараттандыру үлгісі, білім беруді ақпараттандыру.

Қазіргі уақытта білім беруді ақпараттандыру үдерісінің сапалы жаңа деңгейіне қол жеткізуге болады, онда ақпараттандыру оның трансформациясы үшін синонимге айналады («ақпараттандыру-трансформация»). Осы деңгейде ақпараттық-коммуникациялық технологиялар (АКТ) бірнеше онжылдықтар бойы бұқаралық мектепте орын таба алмаған педагогикалық (дидактикалық, әдістемелік, ұйымдастырушылық) идеялар мен шешімдерді жүзеге асыруға көмектеседі. Оқу үдерісін «трансформациялау» деңгейінде белгілі бір пәндер мен пәндерге ғана емес, бүкіл оқу орнының жұмысына қатысты мәселелер