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BIG DATA AND THEIR POSSIBILITIES

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ANNOTATION

This article discusses the use of big data in higher education. Modern technological capabilities have changed the existing methods of data collection, storage and storage in large arrays. Big data processing has significantly increased society's transition to digital technology, the amount of data available. The ability to significantly simplify processes through modern methods, information management, analysis and implementation increases the efficiency of data and their processing.

Keywords: big data, unstructured data, structured data, LMS, NoSQL, queries.

INTRODUCTION

In this state obsujdaetsya ispolzovanie bolshix dannyx v vыsshem obrazovanii. Sovremennыe tehnologicheskie vozmojnosti izmenili sushchestvuyushchie metodi sbora, xraneniya i xraneniya dannyx v bolshix massivax. Processing of large dannyx significantly accelerated the transfer of obshchestva to tsifrovым technologies, the amount of available dannyx. Vozmojnost znachitelno uprostit protsessy s pomoshchyu sovremennyx metodov upravleniya informatsiey, analiza i vnedreniya povyshaet effektyvnost dannyx i ix obrabotki.

Keywords: Large data, unstructured data, structured data, LMS, NoSQL, queries.

This article discusses the use of big data in higher education. Modern technological capabilities have changed the existing methods of collecting, storing and storing data in large arrays. Big data processing has greatly accelerated the transition of society to digital technologies, the amount of data available. The ability to dramatically simplify processes with modern information management, analysis, and implementation techniques increases the efficiency of data and its processing.

Keywords: Big data, unstructured data, structured data, LMS, NoSQL, queries.

The rapidly growing fourth 'education' revolution calls for the improvement and reworking of traditional educational requirements, such as 'effective learning', 'objective learning'. processing on concepts such as conveying knowledge from teacher to student implies going beyond the educational model. These factors lead to the need for technologies to change approaches to the development of the education system or to draw reasonable conclusions about

the need for action. One such technology is Big Data. Big Data in Education is an analytical technology of the education system that measures and names large amounts of structured and unstructured information about students and the learning environment in order to understand the features of its functioning and development. , accept, modify, analyze, and predefine.
Due to the emergence and expansion of information and communication technologies, the question arises as to how to start processing large amounts of data.
There are five basic types of education:
- Personal data;
- E-learning systems for students (e-textbooks, online courses);
- Information on the effectiveness of training materials;
- Administrative (general system) information;
- Forecast data.
In his speeches, I.D. Frumin emphasizes three main directions of Big Data based on the analysis of many approaches and models:
1) Related to thinking (primarily critical and creative thinking);
2) Interaction with others (communication and cooperation);
3) Related to self-interaction (self-regulation, regression, and self-organization).

Professor, [18.10.21 19:24]
Today, Big Data is becoming a language of communication for educational institutions seeking to improve strategic and tactical decision-making technologies. O. Zawaki-Richter and S. Latchem focused on the analysis of the content of more than three thousand scientific articles in the field of "Computer and Education". The analysis shows that over the last 40 years, the causes of information are divided into four chronological stages: - the development of computer education (1976-1986); - Multimedia education (1987-1996); - Network technologies for the organization of joint education (1997-2006); - online education (2007-2016). The attention of the scientific community cannot be found without a comprehensive analysis of online education itself, ways to increase its effectiveness, and Big Data's educational outcomes.
Another aspect of Big Data research is the infrastructure of the data collected. FA De Almeida Neto and A. Castro developed a model based on interactions between users, taking into account the online platforms where the educational activities are located, and the platform itself selects, collects and localizes data. 'stored in databases. Local databases are then collected and grouped into a global database.
Big Data is one of the key factors in the development of information and communication technologies (ICT) today. This direction of ICT development, which is relatively new to Uzbekistan, is widespread in Western countries. This is because in the era of information technology, especially after social media, a significant and increasing amount of information related to each Internet user has been collected, resulting in the development of big data direction.
Big Data is a set of approaches, tools, and tools for processing large and significant amounts of structured and unstructured data that are effective in the context of continuous data growth, in order to obtain human-understood results. a set of methods.

Big data is not a separate technology, but a combination of tested and newly introduced technologies, which allows companies to obtain information from existing data for use in their operations. Big data can be defined as the ability to analyze large amounts of data at a speed sufficient to analyze real-time data and return results in a timely manner.

The term "big data" has caused a lot of controversy. Many believe that the term only refers to the amount of data collected. The problem is that organizations do not produce large amounts of data, but most of them provide a format that is not compatible with a traditional structured database format - such as web logs, video recordings, text documents, computer code, or geographic data. . All of this is stored on different servers and in some cases on external servers. As a result, corporations may have large amounts of their own data, but may not have the tools to build relationships between those data and make decisions based on them. In addition, data is frequently updated, so traditional methods of information analysis do not provide the required speed and quality of large-scale data processing, which is constantly updated, resulting in the need to use large data technologies .

Forrester, an international research company, defines this concept as hardware and software technology that integrates, organizes, manages, and analyzes data described by the "four Vs" (Figure 1).

volume - a very large amount of data collected in databases (Volume), which takes a lot of time to process and store data with traditional MBBT tools; therefore, new approaches and improved tools for processing this data are required;

- variety - diversity of data formats (basic criteria of big data): from different sources in different formats, from different levels of structures - MBBT, hierarchical data, text documents, videos,

images, audio files , table data, etc .; therefore, the ability to process structured and unstructured multi-format data simultaneously is required.

- velocity - the speed of data collection and processing - this feature increases the speed of data collection (2% of data collected in the last 90 years) and the speed of their processing; in recent times, real-time data processing technology has become more demanding.

- veracity - data reliability - users have started to increase the reliability of existing data. Nowadays, internet companies have a problem with the distribution of work done by robots and humans on the company's website, resulting in difficulties in analyzing the data;

The concept of the value of the data collected is relevant. Big data should be useful and beneficial to companies, for example, to help them improve business processes, report, or optimize costs.

Higher education institutions are one of the areas where data quantity, diversity and speed coexist. Every day, a large amount of educational data is collected and created from different sources and in different formats in the higher education ecosystem. Learning information is derived from information obtained from students' use and interaction with educational management systems (LMS) and platforms, learning activities and learning objectives, programs, teaching materials, and activities, exam results, and course assessments, including course curricula, such as course evaluations. In the context of higher education, the size and type of this data, as well as the use of big data, imply the need to use special techniques to uncover new knowledge hidden in the data. Such methods are characterized by large data and can be derived and adapted from other fields that have been used successfully to manipulate large educational data. The methods discussed can be used to develop the concept of 'student academic performance and teaching approaches' and to describe areas as part of larger educational data. Big data analysts have demonstrated promising projects in the implementation of various activities in the field of higher education. These interventions involve "administrative decision-making and the allocation of organizational resources," failing to identify students early, develop effective teaching methods, and turn a traditional perspective into a curriculum. preventing it, reconsidering it as a network of relationships and connections LMS is a variety of data objects collected and regularly produced from social networks, learning activities and training programs.

Relational databases no longer allow solutions to store data and process large amounts of data quickly. Previous software and hardware did not have the ability to fully analyze and process such large amounts of data.

Big data allows you to work with unstructured data and unstructured data such as pictures, text, and videos.

There are many tools and technologies that allow you to work with big data:

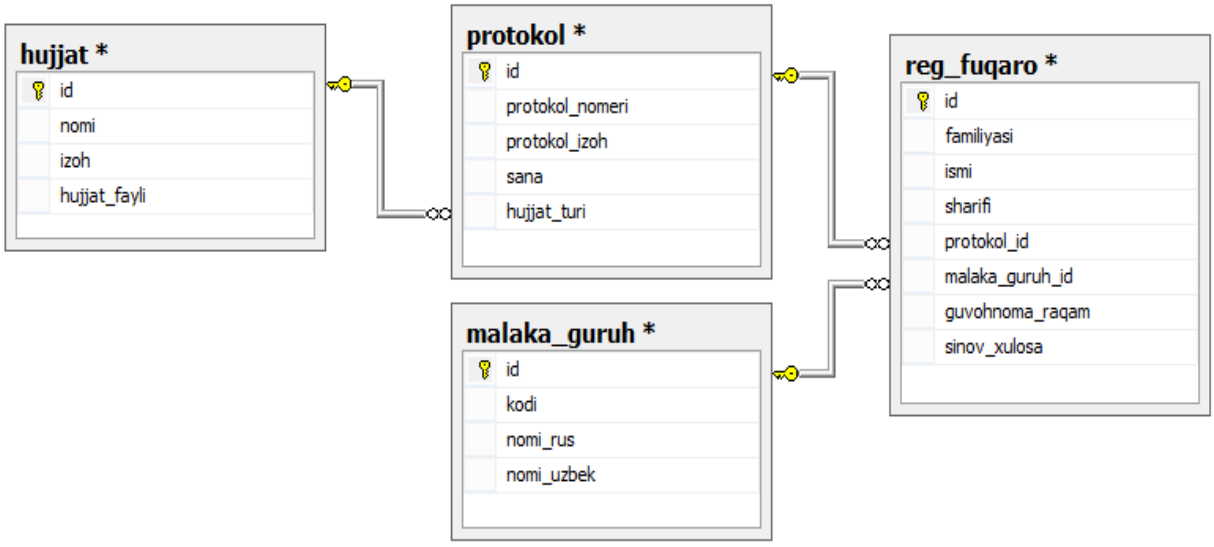

Figure 2.

This e-license application program is mainly used to collect driver's license information from governmental and non-governmental organizations and to prepare e-license templates. The information includes certificate types, templates, groups of students studying in the organization, areas of qualification and certificate information. Groups are formed according to the type of certificate and qualification direction, and students are attached to the groups. As a result, one or more certificates are prepared at the same time and group accounts are automatically generated.

The electronic certificate registration program can be used in the work processes of all certification bodies.

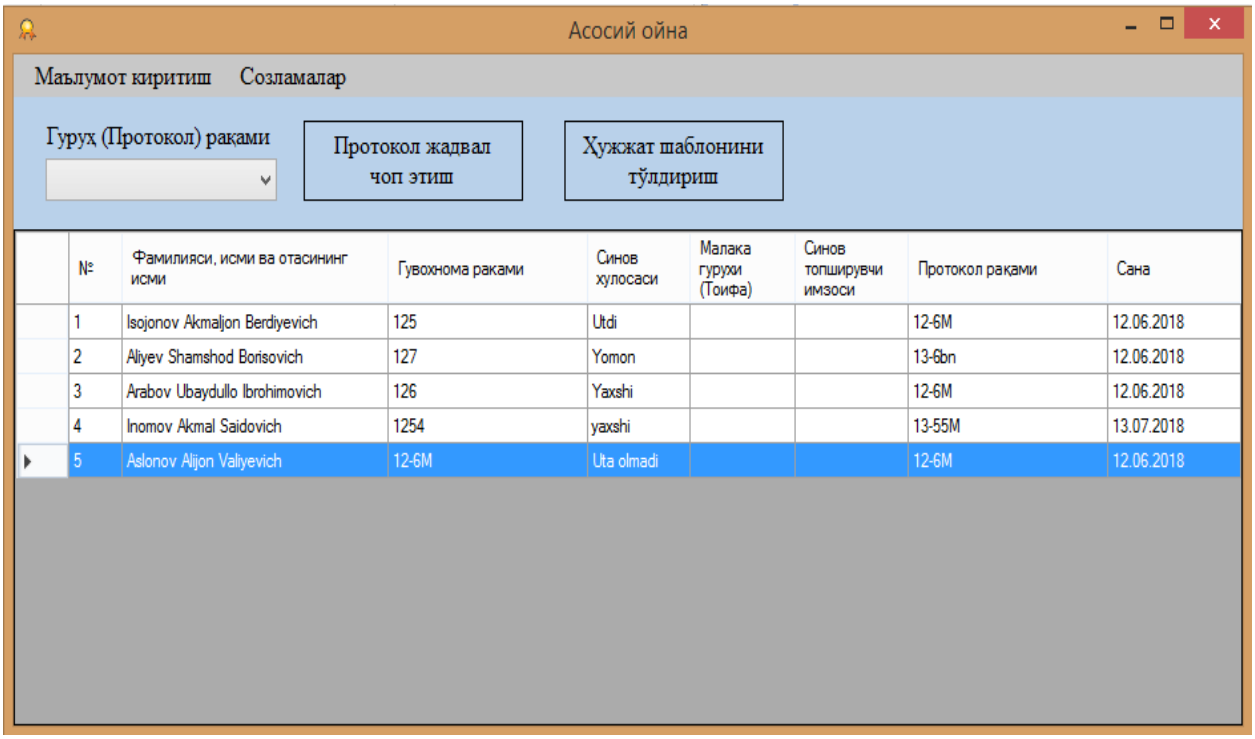

Figure 3 – The main window of the program

In the main window of the program there is a menu "Data entry" and "Settings", buttons "Print protocol table", "Fill the document template" simultaneously prepare certificates and automatically create group accounts. Figure 4 shows the generated state of the general protocols. Based on the information entered in the database, the protocol number and table data will be completed

«SANOAT TEX TA`LIM»
Nodavlat ta`lim muassasi

Укув машгулотлари якунлари буйича билимларни текшириш хайъати
аъзолари тест синовлари якуни буйича

12-6М - СОНЛИ БАЁННОМАСИ

12.06.2018

Куйидаги таркибдаги имтихон олиш комиссияси:

Комиссия раиси _____
(лавозими, фамилияси, исми ва отасининг исми)

Комиссия аъзолари _____
(лавозими, фамилияси, исми ва отасининг исми)

«Саноатгеоконтехназорат» Д И инспектори_____

Утказилган укув машгулотларида _____2-yunalish___курслари буйича машгулотлар якунида билимлар тест синовларидан утказилди.

№	Фамилияси, исми ва отасининг исми	Гувохнома раками	Синов хулосаси	Малака гурухи (Тоифа)	Синов топширувчи имзоси
1	Isojonov Akmaljon Berdiyevich	125	Utdi		
2	Aliyev Shamshod Borisovich	127	Yomon		
3	Arabov Ubaydullo Ibrohimovich	126	Yaxshi		
4	Inomov Akmal Saidovich	1254	yaxshi		
5	Aslonov Alijon Valiyevich	12-6M	Uta olmadi		

Figure 4 - Forming a protocol table

In short, big data is a field of technology that, despite its relatively young age, is widespread in many fields and plays an important role in the development of education.

By combining new data sources with Real-Time Analysis and Behavioral Data, companies can develop next-generation applications that are able to adapt and learn quickly. Big Data is changing the world, and ready-made complex solutions that combine services such as analytics, research, data preparation and integration make it easier to develop new products.

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