APPLICATION PACKAGE AND ITS AREAS OF USE

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ПАКЕТ ПРИКЛАДНЫХ ПРОГРАММ И ЕГО ОБЛАСТИ ПРИМЕНЕНИЯ

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ABSTRACT. This article discusses the use of collaborative learning technologies in educational settings and their impact on improving the quality and effectiveness of learning. This method is also used by a teacher, student, group of students, as well as the community to decide about interaction, to achieve consensus and solidarity, to achieve a common goal, to reveal the inner potential of each student, to express oneself as a person. It is suggested that this will open the door to greater opportunities for the entire group.

Keywords: teacher, student, group, team, knowledge, skills, forms of educational activity.

Introduction. A practical application is any specific program that is designed to solve a problem. One of the conditions for the effective implementation of computer technologies in practice is the creation of specialized application packages. Ease of access and ease of use create conditions for wider use of PCs in technology, science, economics, culture, education in solving specific problems. Packages of Practical Programs (PPP) are usually created on the basis of special systems and continue to evolve in certain directions. They are supplied separately in computer software, have their own documentation and are not part of the operating system. Many packages have their own integration tools [3].

Materials and methods. Based on general trends read from numerous articles on technology, technology education, software application manuals, advanced teaching methods, and teaching methodologies. Five of the most frequently cited, recommended, and noted methods of teaching computer software applications are identified. These include [5]:

direct learning;
problem learning;

video-based training
cooperative learning;
study of documents.

Results and Discussion. A package of practical programs is a set of interconnected programs for solving a certain class of problems, which can be of the following types [5, 6, 7]:

1) Problematic - focused. It is used in problem areas such as control functions, structured data, and processing algorithms.

2) Design automation. It is used in work by designers and technologists who develop drawings, diagrams, diagrams.

3) Generally oriented. Systems that support computer technology, such as word processors and spreadsheets, graphics editors, and database management systems.

4) Office. Provides management of the organizational activities of the office. It includes organizers (written and telephone books, calendars, presentations), translators, and text comprehension tools.

5) Desktop publishing systems are more powerful word processors in terms of functionality.

6) Artificial intelligence systems. This includes those who maintain natural language communication; expert systems that can give recommendations to users in a variety of situations; includes packages of intelligent applications that solve practical problems without programming.

Description of application packages. The term «application software packages» refers to a collection of applications of varying complexity and purpose. As mentioned earlier, it is impossible to draw a clear line between a software product and an application package. With the development of an increasing number of software packages, new definitions appear, which must be understood as a software package.

According to modern concepts, application packages are a collection of joint programs for solving a certain class of problems. Application packages are always intended for users with specific skills in a given area, which can be solved both by programming and using these application packages.

The ability of the applications that make up an application package to coexist means that they can be shared and that the structures that use control data and information stocks are common. It is also necessary to consider application packages as a separate software product, as a separate type of application.

Based on the definition, the following general features of application packages can be distinguished.

- The package consists of several software modules.

- The package is designed to solve a certain class of problems.

- The package has a certain versatility within its class, that is, it allows you to solve all or almost all problems of this class.

The package includes management tools that allow you to select specific options from those available. The package allows you to set certain terms of use.

The package is designed with the organization in mind in mind and meets the general requirements for a software product.

The documents and usage patterns of the package are intended for a user with a specific level of knowledge in the area of expertise related to the issues covered by the package.

Since application packages are designed to solve a certain class of problems, we can talk about the functional purpose of the package.

2. Classification of application packages. Depending on the task, there are application packages that extend the capabilities of OT, for example, for viewing multi-user systems, working with remote subscribers, performing a special file organization, simplifying work with the OS, etc. An example of such packages is the CPB package that implements the time-sharing mode in EC OS, and the Norton Commander package, which simplifies the work with the MS DOS operating system on a personal computer [2].

Packages designed to solve practical user problems can be divided into methodical and problem-oriented. The methodological package is designed to solve the user's problem in one of several ways provided in the package, and the method is either defined by the user or automatically selected based on the analysis of the incoming data. An example of such a package is a mathematical programming package that allows you to solve programming either by the method of penalty problems or one of the options for possible directed methods.

Problem-oriented packages are designed to solve groups (sequences) of tasks using common information. This is the largest group of packages. The problem may be reflected in the general nature of the operations performed by the intended package. Examples of such packages are word processors, spreadsheets, and linear programming packages.

Problem solving can also be given in a general practical problem, the solution of which is divided into separate problems, each of which has its own algorithm in the package. Packages for calculating input-output balances, packages used in various design automation systems, are typical examples [1].

In recent years, so-called integrated packages have become popular, which include a word processor, spreadsheet processor, database management system, graphics package, and remote subscriber communications.

When defining a programming package, it is indicated that the package consists of several programming modules. Such programming blocks are commonly referred to as programming modules. The package is designed to solve a certain class of problems. This class of problems is commonly referred to as the package domain. With regard to application packages for solving computational problems, the subject area defines the organization of certain data components, such as incoming, intermediate, and outgoing data. The package is said to use a database relevant to its subject area.

The package must receive management information from the user in order to perform certain actions selected by the user. This control information is provided in the official language - the language of the package entry. The description of a specific user function in an input language is called a Constraint Logic Programming (CLP) [6].

The solution to each problem in the package is to execute the appropriate algorithm. We call modules that develop programming models of a package

that implement a problem-solving algorithm in a package. Developer modules modify the data that makes up the package database.

Control modules must be included in the package to change the sequence of calls from modules that develop a custom function.

Service modules are included in the package to ensure that the package interacts with the user, and the package management modules interact with the database and developer modules.

Thus, application packages can be thought of as a combination of language accessibility, database, management, maintenance, and development modules. A set of developer modules is often referred to as a package. The management and maintenance modules are called the package system name or package system extension.

The main control module (master module) of the package is started by means of the operating system. then accept the user task, specified in the form of programs in the input language - Constraint Logic Programming (CLP), and perform this task by calling the developer modules and service modules in the required sequence.

By the method of application packages, we mean the organization of user interaction with the package when solving a problem. The choice of an application package depends on many factors, including the capabilities of the selected OS and programming language, the amount of data processed, the duration of the problem, the speed of the application packages (return rate, package user characteristics, problem solving skills and requirements, latency) will be the most important of these.

- Management software
- Database
- Service modules
- Processing modules
- Content of the application package.

There are many ways to use existing application packages, but several standard modes can be distinguished, which are determined by the design of the package itself and the characteristics of the computers and OS used.

The simplest way to create application software packages is to use some of the software in the package as a programming program for some mainstream programming language such as SI. In this case, application packages consist only of development modules and can be considered as an extension of the library of language programs used in programming.

Because of the complexity of the implementation, the following mode assumes that all control information is represented as completed programs in the input language at startup, so that the package is executed accurately. Further work with the package will take place without user intervention. This mode is often referred to as burst mode, similar to OS mode. Batch mode is often useful when you need to solve many problems with a single input language program, when the time required to solve each problem is long enough, and the input language program is complex and large.

Many software packages used on personal computers are designed to interact

with the user to solve problems.

The simplest conversational mode (the conversational variant) is when the user initiates the execution of a package, enters a task in the form of an input language application, and completes the package execution. In practice, this mode differs from the package only in the ability to correct errors in the CLP, the ability to restart the package in case of failure.

A more sophisticated version of dialog mode, also known as snoop mode, provides dynamic control over the execution of batches. Control information is entered by the user in parts and is formed on the basis of the analysis of intermediate results in the process of working with the package. This work in many cases is natural for the user, especially when using text editing programs, working with spreadsheets, solving complex computational problems.

Conclusion. In conclusion, we can say that today it is difficult to work or learn without application packages. The package is used in all areas of science, education, economics, social spheres. Also, ignorance of the application of software packages significantly burdens the work and the education process.

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