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DEVELOPING STUDENTS' CREATIVE ABILITY WITH THE HELP OF PRACTICAL SOFTWARE TOOLS

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Abstract: The modern education system is aimed at students not only acquiring knowledge, but also developing creative thinking and innovative approaches. Technologies, especially practical software tools and electronic information and educational resources (EATR), are an important tool in the development of individual and collective creativity, which help students generate new ideas, analyze data and develop new solutions. This article analyzes the methods of developing students' creative abilities through the use of practical software tools and electronic information and educational resources and their impact on the educational process.

Keywords: development of creative abilities, practical software tool, Pascal program, modeling.

Practical software tools create new opportunities for students in the learning process. With the help of these tools, the student not only acquires technical knowledge, but also develops his creative abilities. The following practical software tools are important in developing students' creativity:

Graphic design programs (Photoshop, Illustrator, InDesign)

These programs help students develop their visual imagination. Working in the field of graphic design teaches students to think creatively about color, shape,and composition. Students can realize their ideas by creating new and original designs.

Video editing software (Adobe Premiere, Final Cut Pro)

Video editing and editing skills allow students to express their creativity. During the video development process, students learn to work with various visual effects, music, and narrative structures, which expands their creative thinking.

3D modeling and animation software (Blender, AutoCAD, Maya)

Through 3D modeling and animation software, students learn to create realistic models and bring them to life. This process provides students with the opportunity to combine technological and creative aspects.Dasturlash tillari (CC+, Delphi, paskal)

Knowing programming languages saves students time and allows them to study the subject in depth. Complex problems that require a lot of calculations can be solved in a convenient way by translating them into programming languages.

The role of practical software tools in developing students' creativity.

Practical software tools allow students to quickly implement their ideas. With these tools:

Support innovative thinking: Students demonstrate their creative abilities by using their software tools to generate new ideas and solutions. For example, through video or graphic design, students develop new approaches to solving visual problems.

Teamwork and Collaboration:

Many software tools allow multiple users to work simultaneously. This, in turn, develops cooperation and team thinking among students, increasing their interest in carrying out creative work together.

Development of practical skills:

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With the help of software tools, students acquire not only theoretical, but also practical skills. For example, through 3D modeling, video editing, or programming, students develop creative approaches to solving real-world problems.

Learning new technologies:

With the help of practical software tools, students learn modern technologies and use them to implement their ideas. This, in turn, creates new opportunities for students and helps them develop creative thinking.

Using the practical software tools, the Pascal programming language, we will consider several problems that require a lot of calculations.

1. EKUB and EKUK

Definition: The largest of the numbers that divide each of the numbers a1 , a2 , a3 , ... , anЄ is called the EKUB of the given numbers and is denoted as (a1 , a2 , a3 , ... , an).

Definition: The smallest of the numbers that divide each of the numbers a1 , a2 , a3 , ... , anЄ is called the EKUK of the given numbers and is denoted as [a1 , a2 , a3 , ... , an].

Example 1:

1. If a=6, b=18, c=24, then (6,18,24)=6.
2. If a=12, b=16, then [12,16]=48.

```
program Euclid;
var a,b,c:integer;
start
write ('a,b='); readln(a,b);
while b>0 do
start
c:=a mod b; a:=b; b:=c;
and
writeln(a);
end.
```

exercises:

1. (6,14,20) = ?
2. (10, 25, 32) = ?
3. (24, 18, 38) = ?
4. (36, 48, 50) = ?

2. Factoring a natural number

Factoring a given natural number into prime factors is one of the fundamental problems of number theory. Let's write a program to factor a natural number into prime factors.

```
Label 1;
var q,s,k,x:real;
n,i:integer;
begincls;
readln(n);
write(n,'=1');
q:=n;
x:=0;
if not(q=2) then
for i:=2 to n-1 do
```

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```
begin
s:=0;
1: if q/i=trunc(q/i) then
begin
s:=s+1;
q:=q/i;
x:=1;
if q/i=trunc(q/i) then goto 1;
if s=1 then write('*',i)// This ensures that the part is not overwritten if the degree is 1
        else write('*',i,'^',s);// This part outputs if the degree is different from 1
        end;
        end;
        if x=0 then write('*',n);
        end.
```

Exercises: Factor the following numbers.

586, 748, 690, 8570, 52491, 1872, 2320, 2500, 2456, 2871, 35847, 4437.

This program is written in Pascal and can be used by students to create programs to solve various problems on a computer.

Developing students' creative abilities with the help of practical software tools is becoming an integral part of the modern educational process. Working in areas such as graphic design, video editing, 3D modeling, and creating programs to solve complex computational problems not only gives students the opportunity to realize their ideas, but also to develop creative thinking. These tools also provide students with the opportunity to learn new technologies and apply them to solve real-world problems.

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