

POSSIBILITIES OF PANEL COMMANDS USED IN AUTOCAD GRAPHICS PROGRAM IN BUILDING DESIGN

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Аннотация: Программа AutoCAD – отличная и популярная программа автоматизированного проектирования, которая позволяет создавать любые типы схем и чертежей с высокой точностью и качеством. Особенно эта программа широко используется в архитектуре и проектировании зданий. Используя эту программу, мы экономим больше времени, чем когда рисуем проект здания вручную, а поскольку эта программа работает очень точно, наш проект выполняется очень точно. Мы предоставим информацию о командах панели, которые нам понадобятся в этом процессе.

Abstract: AutoCAD program is an excellent and popular, and automated design program, which can create any type of scheme and drawings with high accuracy and quality. Especially this program is widely used in architecture and building design. By using this program, we save more time than when we draw the building project by hand, and because this program works very accurately, our project is done very accurately. We will provide information about the panel commands that we will need in this process.

Ключевые слова: инновация, технология, пространство, форма, конструкция, внедрение, приемственность, технология, грамотность.

Key words: innovation, technology, drawing, the form, design, introduction, receivership, graphic literacy.

Decree of the President of the Republic of Uzbekistan No. PF-5812 dated September 6, 2019 “On additional measures to further improve the professional education system”, Resolutions No. PQ-3775 dated June 5, 2018 “On additional measures to improve the quality of education in higher education institutions and ensure their active participation in the comprehensive reforms being implemented in the country”, Resolutions No. PQ-5847 dated October 8, 2019 “On the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030”, Resolutions No. PQ-4623 dated February 27, 2020 “On measures to further develop the field of pedagogical education”, Resolutions No. PQ-4623

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AutoCAD is a computer-aided design (CAD) program developed by Autodesk. It is widely used in the fields of engineering, architecture, construction, and design.

The main features of the AutoCAD program:

1 - Drawing creation and editing - Development of two-dimensional (2D) and three-dimensional (3D) projects.

2 - Accurate measurements - Special measurement tools for creating accurate and precise drawings.

3 - Working with layers (Layers) - Placing and managing various elements on separate layers.

4 - Blocks and library - The ability to save and reuse used shapes.

5 - Rendering and 3D modeling - Creating three-dimensional objects and depicting them in a realistic way.

6 - Exporting and importing files - Working with formats such as DWG, DXF, as well as converting to PDF or other formats.

7 - Mathematical and geometric calculations - Automatic calculation of complex engineering drawings.

Areas of application of the AutoCAD program:

Architecture - Creating projects of buildings and structures.

Engineering – Preparation of drawings for mechanical engineering, electrical engineering and other fields.

Landscape design – Drawing of garden and park projects, urban development.

AutoCAD is one of the most widely used programs in the field of engineering and design, and is also widely used in building design. With this program, you can create, edit drawings and facilitate engineering calculations. AutoCAD has various panels that speed up the design process and help achieve accurate results. To use the program effectively, it is important to know its panel commands perfectly. The most commonly used panel commands in building design in AutoCAD are as follows.

Draw Panel – This panel contains the basic tools for creating drawings and works with the following commands:

Line – Draws straight lines. Used to create the main contours in a drawing project.

Polyline – Creates continuous multi-line objects. Useful for creating walls or complex contours.

Circle – Draws a circle. Used to create doors, windows, or other circular shapes.

Rectangle – Draws a rectangle. Used to design rooms and other square-shaped objects.

Arc – Draws curves. Used to design curved objects.

Hatch – Adds texture or color to drawings. Helps create images of various materials.

Modify Panel – Modify panel.

Move – Moves an object to another location.

Copy – Creates a copy of an object, using copies you can create symmetrical or repeating elements.

Rotate – Rotates an object. Useful for changing the location of doors and windows.

Scale – Increase or decrease the size of an object.

Trim – Used to trim unnecessary lines, create fine details in interior design.

Extend – Used to extend lines, combine walls and other elements.

Mirror – Useful for reflecting objects, creating symmetrical drawings.

Annotation Panel – This panel is used to add explanations and dimensions to a drawing.

Text – Add text. Allows you to add explanations and descriptions to the drawing.

Dimension – Set the dimensions of the drawing. Helps you understand the project correctly through precise dimensions.

Leader – Add a text leader. Used to highlight special parts and explanations.

Table – Used to create a table, list materials and quantities.

Layers Panel – Used to manage drawing layers.

Layer Properties – Allows you to change layer properties, create a separate layer for each element.

New Layer – Create a new layer.

Layer On/Off – Turn a layer on or off, useful for keeping drawings clean.

Freeze/Thaw – Freeze or unfreeze layers, used to maintain order in complex projects.

Properties Panel – This panel allows you to change various properties of objects.

Color – Change the color of an object.

Lineweight – Adjust the line weight.

The process of designing a building in AutoCAD is much more convenient and efficient, and you can speed up the process with the help of special panel commands. The Draw, Modify,

Annotation, Layers and Properties panels are the most important tools, with which you can create accurate and high-quality projects. Also, knowing how to properly manage layers and correct the project will increase efficiency. Using the right tools, you can bring your drawings to a professional level.

List of used literature:

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