LECTURE # 1

In this lecture you will learn about:

- ❖ Introduction of AutoCAD
- ❖ Application of AutoCAD
- ❖ Manual Drawing Vs AutoCAD
- ❖ Graphical User Interface of AutoCAD

Course Name:

"Computer Aided Building Modeling and Design"

Course Code: CT-355

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INTRODUCTION

The AutoCAD software is launched by Autodesk. This software is mainly developed initially for the drawing as before 1995 the drawings was done manually using mini-drafter, therefore was very time consuming and making modifications was very difficult. It version was developed in 1982 and was called Comdex.

In order to execute the drawings on the field, one must be able to read the drawings. AutoCAD makes it easier to draw and interpret the drawings. AutoCAD is a tool in which we can draw and modify any type of drawings using different commands such as line, rectangle, construction line etc. In AutoCAD we can do two dimensional as well as three dimensional drawings.

INTRODUCTION

This AutoCAD tool is very user friendly because we can do modify very easily and copy the drawings 'n' number of times such that the original drawing can be retained as it is in the same working window, this helps in keeping both old and revised drawings.

The use of AutoCAD has spread widely all over the world because of its simple in user-friendly nature. AutoCAD has many versions such as AutoCAD 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007,2008,2009, 2010,2011,2014,2016, 2017 and the latest being

2019. The file format of AutoCAD is **.dwg**

APPLICATIONS OF AUTOCAD

- AutoCAD improves the productivity of the designer to visualize the product and its component, parts and reduces the time required in synthesizing, analyzing and documenting the design.

- AutoCAD system permits a more detailed engineering analysis and a larger number of design alternatives can be investigated.

- The use of AutoCAD system provides better engineering drawings, more standardization in the drawing, and better documentation of the design, few drawing errors and legibility.

APPLICATIONS OF AUTOCAD

- AutoCAD serves as engineering drafting tool for designing various components, while minimizing human errors.

- AutoCAD's innate features that enable its users to plan out architectural spaces, map them out and can be used simultaneously with 3D Max, Maya and other design/animation tools when the need arises. AutoCAD supports the use of DWG and DXF files which can be exported from its interface to those of other advanced CAD applications to aid animation projects.

AUTOCAD VS MANUAL DRAWINGS

- AutoCAD is easier to understand and is user- friendly.

- AutoCAD is much faster than manual drawings. Hence, its less time consuming.

- It is more accurate, therefore, errors are reduced.

- Creating backups easier, hence no problem of storage.

- Etransmit option in AutoCAD, enables the user to transfer his/her document easily to the client in any part of the world.

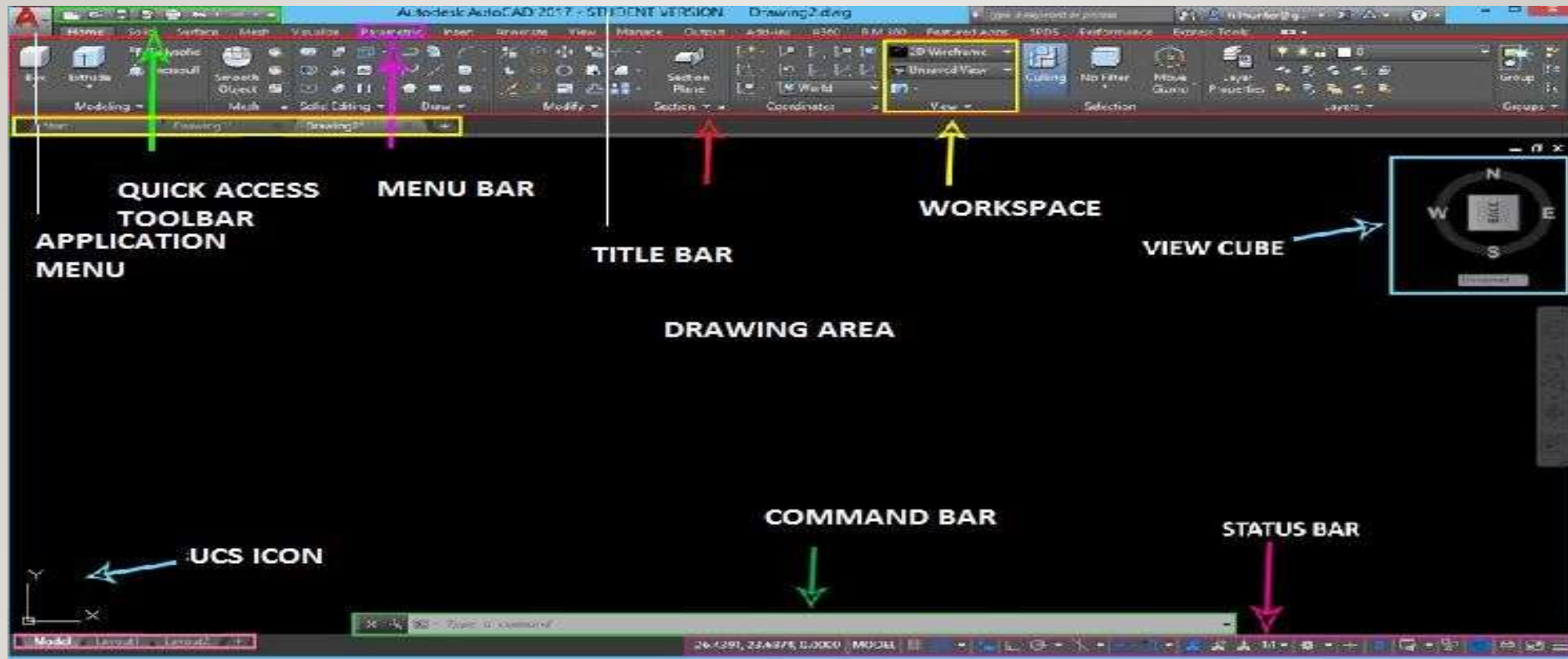- Updation and modification is much easier.

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LAUNCHING AUTOCAD

- Choose the AutoCAD icon from the desktop and double click.

GRAPHICAL USER INTERFACE

GRAPHICAL USER INTERFACE

The Graphical User Interface (GUI) of AutoCAD contains the Quick Access Toolbar, Title Bar, Ribbon, Status Bar, UCS icon, application menu, workspace etc.

❖ Application Menu
❖ Quick Access Toolbar
❖ Title bar
❖ Ribbon
❖ Drawing Area
❖ Command Bar
❖ View Cube
❖ UCS Icon
❖ Status Bar

GRAPHICAL USER INTERFACE CONTD...

❖ **Application Menu** The application menu contains basic commands pertaining to the drawing as a whole, such as Open, Save, Print, and Export.

❖ **Quick Access Toolbar** is a customizable area of the interface where you can add your favorite or frequently used commands.

❖ **Title bar** contains the title of the project and the version of AutoCAD used.

GRAPHICAL USER INTERFACE CONTD…

❖ **Ribbon** is below the title bar. The menus and toolbars have been replaced with the ribbon, which helps you to find the commands quickly.

❖ **Drawing Area** covers maximum space on the interface. All the drawings are drawn in this area

❖ **Command Bar** is a palette where you can type in commands and view history of the commands.

GRAPHICAL USER INTERFACE CONTD…

❖ **View Cube** is in the upper right, from which you can change the view and UCS. Just below that is the NavBar that gives you controls for zooming, panning, orbiting, and more.

❖ **UCS Icon** User Coordinate System is in the lower left hand corner which tell you the general orientation. UCS helps to orientate the drawing with respect to the current co-ordinate system and in particular, to know where the co-ordinate system origin is located.

❖ **Status Bar** The Status bar displays some important details like the scheduling mode of new tasks (manual or automatic)