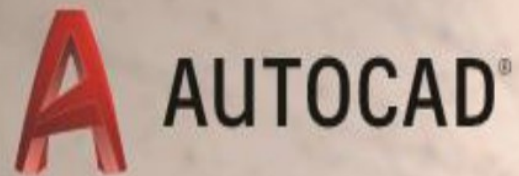




# Automatic Aided Design

**"AUTOCAD"**

*Lecture One*



# LEARN ABOUT AUTOCAD

An Introduction to AutoCAD for Beginners

## مقدمة عن اوتوكاد

- اساسيات اوتوكاد
- كيفية تنصيب اوتوكاد
- تشغيل اوتوكاد لأول مرة
- استخدام الفأرة (الماوس) و لوحة المفاتيح

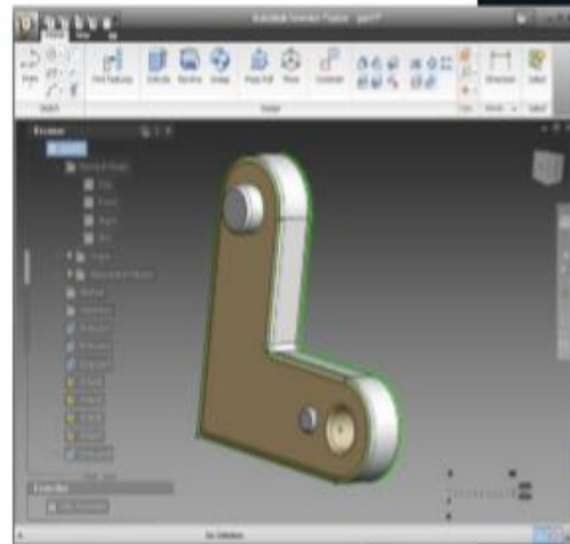
# What is CAD?

# Autodesk

- Computer Aided Drafting
- Autodesk is the most popular drawing program
- Many student versions available for free online at [students.autodesk.com](https://www.autodesk.com/students.autodesk.com)
  - AutoCAD
  - Architecture
  - Mechanical
  - Revit
  - Inventor
  - Civil
  - MEP
  - etc.



- Capabilities:
  - 2D line drawings
  - 3D constructions
  - Rendering
  - Part Assemblies



ما هو اوتوكاد؟

برنامج محوسب

الأكثر شيوعا في مجال الرسم

الهندسي

تتوفر نسخ مجانية للطلبة في الرابط

<https://www.autodesk.com/education/home>

قابليات اوتوكاد:

رسم ثنائي الابعاد

رسم ثلاثي الابعاد

ربط الأجزاء ببعضها ( التركيب )

## Install AutoCad

1. AutoCad is on your computer? Do Nothing
2. You have an old version? Update  
*Versions 2016-2020 are close to each others*
3. No AutoCad on your computer? Yes:
  - a. Let a programmer to install it on your computer
  - b. You install AutoCad from CD, Free Link, or buy from internet

Installation steps are in the following slides

## تنصيب اوتوكاد على حاسوبك:

1. اوتوكاد موجود على حاسوبك؟ اذن لا تفعل شيئاً
2. لديك نسخة قديمة من اوتوكاد؟ قم بتحديثها  
النسخ الحديثة من اوتوكاد (2016-2020) لديها خصائص  
مقاربة جداً
3. لم يتم تنصيب اوتوكاد على حاسوبك؟ نعم ...
  - ا. استعن بمختص لتنصيب البرنامج
  - ب. يمكنك تنصيب البرنامج بنفسك باستخدام قرص (سي دي)  
او من خلال الرابط المجاني أعلاه او من خلال شراءه من شبكة  
الانترنت

خطوات التنصيب في الواجهات التالية

**Install Step 1:**

**Open the link or the CD**

**التنصيب: الخطوة 1:**

**افتح الرابط او القرص**

The screenshot shows a web browser window displaying the Autodesk website. The address bar shows the URL: [www.autodesk.com/education/free-software/autocad#](http://www.autodesk.com/education/free-software/autocad#). The page features the Autodesk logo, a search bar, and user information for 'MOSTAFA ALI'. The main heading is 'Education: Downloads AUTOCAD'. Below this, there is a section titled 'Free software download for students & educators' with a sub-heading 'AutoCAD'. The description states: 'Design and shape the world around you with the powerful, connected design tools in AutoCAD software. Create stunning 3D designs, speed documentation, and connect with the cloud to collaborate on designs and access them from your mobile device.' There are two buttons: 'Learn more' and 'Get the full suite'. A red box at the bottom of the page contains the URL: <http://www.autodesk.com/education/free-software/autocad>. The Windows taskbar at the bottom shows the time as 8:08 PM on 8/29/2015.

## Install Step 2:

Press Setup.exe

التنصيب: الخطوة 2:

اضغط على ايقونة تنصيب

ck Audio Video Subtitle Tools View Help

AutoCAD\_2016\_English\_Win\_64bit\_Trial\_dlm

File Home Share View

← → ↕ > This PC > New Volume (F:) > Original > Autodesk > AutoCAD\_2016\_English\_Win\_64bit\_Trial\_dlm

Search AutoCAD\_2016\_English...

Name	Date modified	Type	Size
3rdParty	8/29/2015 6:58 PM	File folder	
CER	8/29/2015 6:59 PM	File folder	
Content	8/29/2015 6:59 PM	File folder	
en-us	8/29/2015 7:01 PM	File folder	
EULA	8/29/2015 7:01 PM	File folder	
NLSDL	8/29/2015 7:01 PM	File folder	
Setup	8/29/2015 7:01 PM	File folder	
SetupRes	8/29/2015 7:01 PM	File folder	
Tools	8/29/2015 7:01 PM	File folder	
x64	8/29/2015 7:12 PM	File folder	
x86	8/29/2015 7:12 PM	File folder	
autorun.inf	10/24/2011 6:14 PM	Setup Information	1 KB
dlm.ini	4/3/2015 7:37 AM	Configuration settings	1 KB
Setup.exe	1/26/2015 7:59 AM	Application	959 KB
setup.ini	4/1/2015 6:36 PM	Configuration settings	54 KB

15 items

8:21 PM

**Install Step 3:**

**Press Install**

**التنصيب: الخطوة 3:**

**اضغط نصب**

ck Audio Video Subtitle Tools View Help

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

Installation instructions: English

→ Create Deployment

⚙️ Install Tools & Utilities

🖱️ **Install**  
Install on this computer

Installation Help | System Requirements | Readme

Exit

Search AutoCAD\_2016\_English...

15 items 1 item selected 958 KB

8:21 PM

## Install Step 4:

Select Accept

التنصيب: الخطوة 4:

اختر موافق

back Audio Video Subtitle Tools View Help

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

Install > License Agreement

Country or Region: United States

Computer and permit Access to such Licensed Materials from multiple Computers through a Supported Virtualization Application, on a Networked Basis, solely by Licensee's Personnel, solely for Licensee's Internal Business needs, only so long as the maximum number of concurrent Sessions does not exceed the Permitted Number or other limits imposed by the Autodesk License Manager tool (if any). For purposes of this Session Specific Network License, (a) a "Session" is defined as a single interactive information exchange between two Computers that are connected through a Supported Virtualization Application, and (b) "Supported Virtualization Application(s)" are those third party virtualization applications or methods that are specifically identified as supported by Autodesk in the User Documentation for the Licensed Materials. With respect to the applicable Supported Virtualization Application, Licensee agrees to activate any available session tracking mechanism, not disable any such session tracking mechanism and to retain all records generated by such session tracking mechanism. A Session Specific Network License is for a perpetual term, except as otherwise provided in this Agreement.

I Reject  I Accept

Installation Help | System Requirements | Readme

Back Next Cancel

15 items 1 item selected 958 KB

Search the web and Windows

8:21 PM 8/29/2015



## Install Step 5:

Input Serial Number

التنصيب: الخطوة 5:

ادخل الرقم التسلسلي

File Audio Video Subtitle Tools View Help

The screenshot shows the Autodesk AutoCAD 2016 installation wizard. The window title is "Autodesk® AutoCAD® 2016". The main heading is "AUTODESK® AUTOCAD® 2016" with the Autodesk logo. Below the heading, it says "Install > Product Information".

The "Product language" section has a dropdown menu set to "English".

The "License Type" section has two radio buttons: "Stand-Alone" (selected) with the subtext "Use a license on the workstation", and "Network" with the subtext "Use a license from my network".

The "Product Information" section has two radio buttons: "I want to try this product for 30 days" and "I have my product information" (selected). Below the selected option, there are two input fields: "Serial number:" and "Product key:". The serial number field is currently empty.

At the bottom of the wizard, there are three buttons: "Back", "Next", and "Cancel".

In the background, a Windows File Explorer window is open, showing the "This PC" view with various folders like Desktop, Documents, Downloads, etc. The taskbar at the bottom shows the Windows Start button, search bar, and several application icons. The system tray shows the date and time as "8:21 PM 8/29/2015" and the language as "ENG".

**Install Step 6:**

**Select Autodesk**

**التنصيب: الخطوة 6:**

**اختر اوتوديسك**

jack Audio Video Subtitle Tools View Help

Autodesk® AutoCAD® 2016

**AUTODESK® AUTOCAD® 2016**

Install > Configure Installation

Autodesk® AutoCAD® 2016  
Speed documentation and explore 3D concepts with the powerful connected design tools of AutoCAD software®.

Autodesk® ReCap™  
Visualize, clean and organize your Reality Capture data in a powerful preparation environment.

**Shared Components**

A360 Desktop  
Desktop companion for collaboration from the desktop.  
Earlier versions of A360 Desktop will be updated.

Installation path: C:\Program Files\Autodesk\ Browse... Disk space: 3.64 GB required / 143 GB available

Installation Help | System Requirements | Readme

Back Install Cancel

## Install Step 7:

Wait until Completion of installation

التنصيب: الخطوة 7:

انتظر اكمال التنصيب

ck Audio Video Subtitle Tools View Help

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

Install > Installation Progress

Microsoft Visual C++ 2008 SP1 Redistributable... Installing...

Overall progress... 19 of 20 remaining

Installation Help | System Requirements | Readme

Cancel

**Install Step 8:**

**Press Launch Now**

**التنصيب: الخطوة 8:**

**اضغط اطلق الان**

ols View Help

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

AUTODESK.

Install > Installation Complete

You have successfully installed the selected products.  
Please review any product information alerts.

- ✓ Autodesk® AutoCAD® 2016  
Speed documentation and explore 3D concepts with the powerful connected design tools of AutoCAD software®.
- ✓ Exchange App Manager  
This plug-in can be used with AutoCAD to simplify the process of managing apps installed from Exchange. (Recommended)
- ✓ Exchange Featured Apps plug-in  
This plug-in adds a tab to the ribbon that displays promoted, or recommended apps. (Recommended)
- ✓ Autodesk® AutoCAD® Performance Reporting Tool  
This plug-in can be used to report AutoCAD performance problems to Autodesk. (Recommended)
- ✓ Autodesk® BIM 360™ Add-in for AutoCAD® 2016  
This add-in supports round-trip BIM coordination workflows between AutoCAD and the BIM 360 Glue cloud. (Recommended)
- ✓ Autodesk Application Manager

Installation Help | System Requirements | Readme

Launch Now

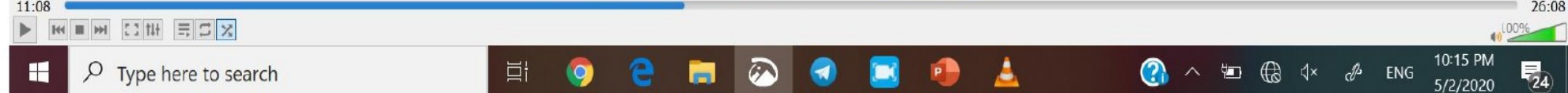
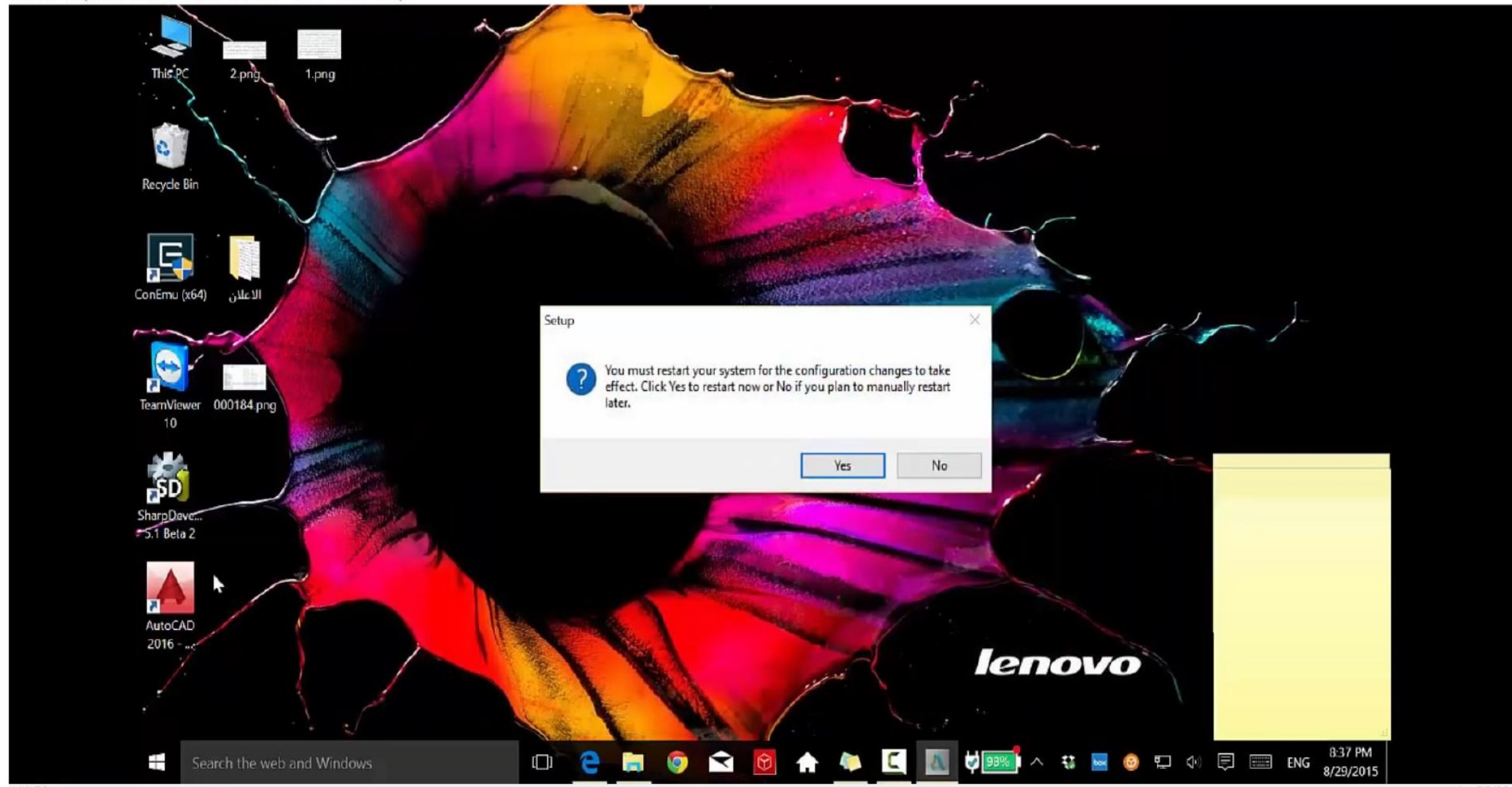
## Install Step 9:

Restart your computer

التنصيب: الخطوة 9:

اعد تشغيل الحاسوب

المقدمة (1 - 2016) تعلم اوتوكاد.mp4 - VLC media player  
Media Playback Audio Video Subtitle Tools View Help



## Install Step 10:

If you press on the icon of run you will get this interface

التنصيب: الخطوة 10:

عند الضغط على ايقونة التشغيل ستظهر لك هذه الواجهة

المقدمة (1 - 2016.mp4 - VLC media player

Media Playback Audio Video Subtitle Tools View Help

Autodesk AutoCAD 2016 - STUDENT VERSION

Home Insert Annotate Parametric View Manage Output Add-ins A360 Express Tools Featured Apps BIM 360 Performance

Draw Modify Annotation Layers Block Touch

Start

Get Started

Start Drawing

Templates

Open Files...

Open a Sheet Set...

Get More Templates Online

Explore Sample Drawings...

Recent Documents

Data Extraction and Multileaders Sample  
Last Opened Saturday, August 29, 2015  
8:50:56 PM

Floor Plan Sample  
Last Opened Saturday, August 29, 2015  
8:50:53 PM

Assembly Sample  
Last Opened Saturday, August 29, 2015  
8:50:05 PM

Connect

Sign In to A360  
Access online services

Sign In...

Send Feedback  
Help us improve our products

Send Feedback

LEARN 8 CREATE

Search the web and Windows

11:30

9:02 PM 8/29/2015 26:08

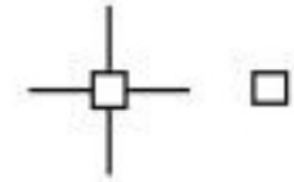


Type here to search

# الفأرة (الماوس)

## The Mouse

Most people use a mouse as their pointing device, but other devices have equivalent controls.



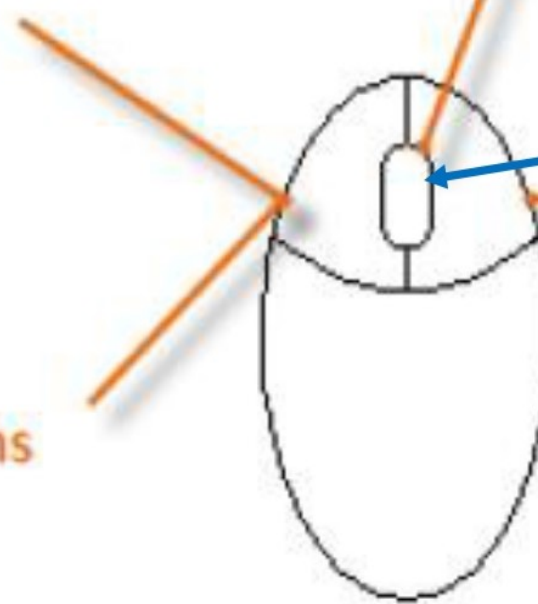
select objects  
اختر احد الموجودات



pan and zoom  
امسك او قرب او ابعد

قوائم مختصرة  
shortcut menus

specify locations  
حدد الموقع



### Scroll

Very Important

Scroll Forward → Zoom in

Scroll Backward → Zoom out

Hold Scroll → Hold

البكرة: مهمة جدا

دور البكرة باتجاه الامام -- < تقريب الصورة

دور البكرة باتجاه الخلف -- < ابعاد الصورة

اضغط على البكرة - امسك الرسم و حركه أينما تريد

# لوحة المفاتيح

**Escape**

Stop Command اوقف الامر

**Back Space**

Delete input

احذف

**Delete** امسح

Delete Element or more امسح العنصر

Delete Line, Circle, ..... امسح الخط او الدائرة

**Tab** الانتقال

**Important**

**Key**

Can be used to Jump from input to input

انتقل من خانة الى خانة

**Control** Important; many tasks

Ctrl+A : Select All اختر الجميع

**Space**

Important; many tasks  
عدة مهام

**Comma** , فارزة

Can be used to Jump from input to input

القفز من ادخال الى اخر

**< ,** اصغر من

Shift+ Comma

عدة مهام Few tasks

**> ,** اكبر من

Shift+ . شفت + نقطة

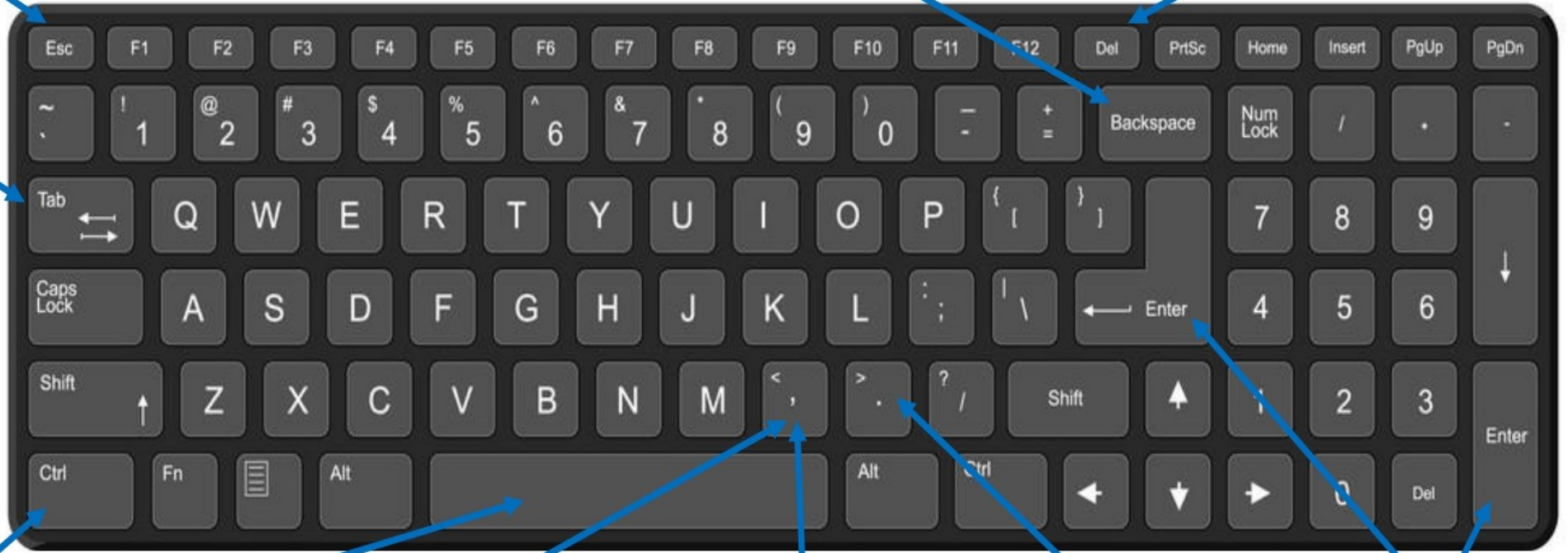
عدة مهام Few tasks

**Enter** ادخل

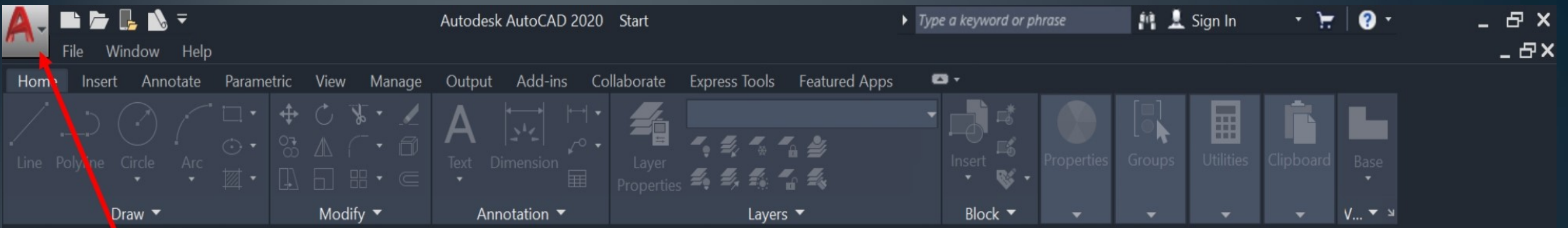
**Very Important**

To Execute any command

لتنفيذ اي امر اضغط ادخل







فتح ملف جديد، ملف سابق، حفظ  
ملف، طباعة، .....

فتح ملف جديد

الملفات السابقة

فتح ملف سابق من الحاسوب

### Recent Documents

- Drawing1**  
Last Opened Wednesday, April 29, 2020  
6:00:53 AM
- Drawing7**  
Last Opened Wednesday, April 29, 2020  
5:33:08 AM
- Drawing6**  
Last Opened Wednesday, April 29, 2020  
5:32:59 AM

### Notifications

April 2020: Have you tried attaching hyperlinks to drawing objects to make it easier to access design specifications, online part catalogs, or project files?  
[Add Hyperlinks to DWG Files](#)

### Connect

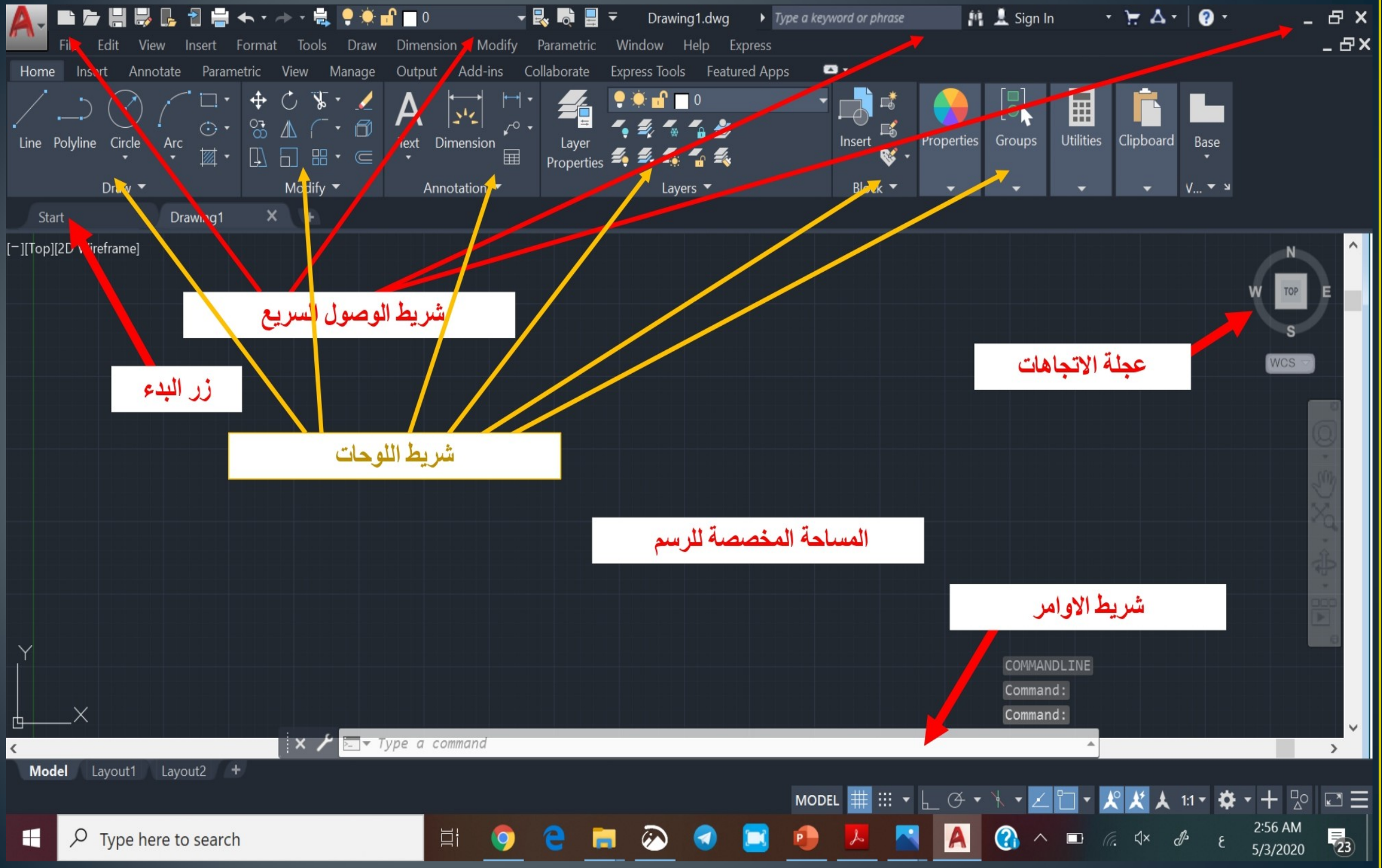
**Sign In to your Account**  
Access online services  
[Sign In...](#)

**Send Feedback**  
Help us improve our products

فتح قالب جاهز

نماذج رسومات







## Remarks

**The Units:**      الوحدات

**No UNITS are required in AutoCad**

الـأوتوكاد لا يهتم بالوحدات و على المستخدم ان يقرر وحدات القياس التي يستخدمها  
و لكن يجب توحيد الوحدة المستخدمة في الرسم الواحد

**The Scale:**      مقياس الرسم

**The suitable and common Scale is 1:1**

مقياس الرسم المناسب و السائد في الـأوتوكاد هو 1:1  
هذا المقياس يكون اثناء الرسم  
و لكن يمكن استخدام مقياس الرسم المناسب للطباعة و حسب حجم ورق الطباعة