

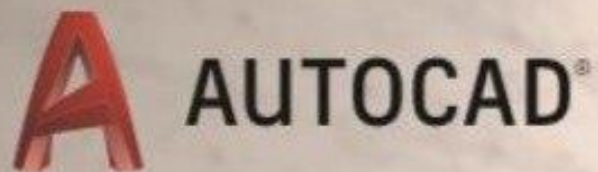
Automatic Aided Design

"AUTOCAD "

Stage: 1

Lecture One

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LEARN ABOUT AUTOCAD

An Introduction to AutoCAD for Beginners



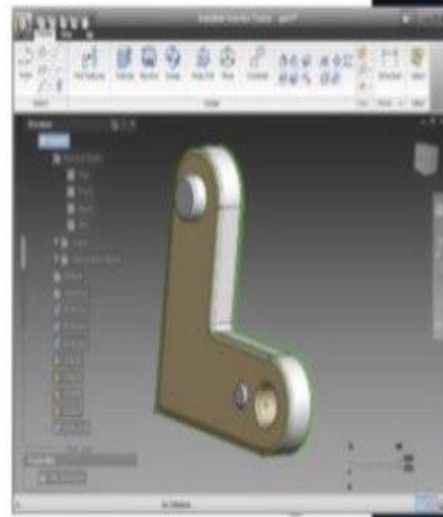
What is CAD?

- Computer Aided Drafting
- Autodesk is the most popular drawing program
- Many student versions available for free online at students.autodesk.com
 - AutoCAD
 - Architecture
 - Mechanical
 - Revit
 - Inventor
 - Civil
 - MEP
 - etc.



Autodesk

- 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)

تنصيب اوتوكاد على حاسوبك:

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

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 متقاربة 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 Education Free Software download page for AutoCAD. The browser's address bar shows the URL 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 AutoCAD section includes a description: '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 navigation menu on the left lists 'Education home', 'Free software', 'Learn & teach', 'Competitions & events', 'Prepare & inspire', 'Support', and 'About Autodesk Educ'. A 'FEEDBACK' button is visible on the right side. At the bottom, a red box highlights the URL <http://www.autodesk.com/education/free-software/autocad>. The Windows taskbar at the bottom shows the time as 8:05 PM and the language as ENG.

Install Step 2:

Press Setup.exe

التنصيب: الخطوة 2:

اضغط على ايقونة تنصيب

Audio Video Subtitle Tools View Help

The screenshot shows a Windows File Explorer window with the following details:

- Address bar: This PC > New Volume (F:) > Original > Autodesk > AutoCAD_2016_English_Win_64bit_Trial_dlm
- Search bar: Search AutoCAD_2016_English...
- Table of files and folders:

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

The 'Setup.exe' file is highlighted with a blue selection bar. The taskbar at the bottom shows the time as 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

15 items 1 item selected 958 KB

Install Step 4:

Select Accept

التنصيب: الخطوة 4:

اختر موافق

back Audio Video Subtitle Tools View Help

The screenshot shows the Autodesk AutoCAD 2016 installation window. The window title is "Autodesk® AutoCAD® 2016". The main heading is "AUTODESK® AUTOCAD® 2016". Below the heading, it says "Install > License Agreement". A dropdown menu for "Country or Region" is set to "United States". The main text of the license agreement is visible, starting with "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."

At the bottom of the window, there are two radio buttons: "I Reject" and "I Accept". The "I Accept" button is selected and has a mouse cursor over it. Below the radio buttons are three buttons: "Back", "Next", and "Cancel".

The background shows a Windows 8.1 desktop with a File Explorer window open to "This PC > Network" and a search bar for "AutoCAD_2016_English...". The taskbar at the bottom shows various application icons and the system tray with the date and time "8:21 PM 8/29/2015".

Install Step 5:

Input Serial Number

التنصيب: الخطوة 5:

ادخل الرقم التسلسلي

The screenshot shows the Autodesk AutoCAD 2016 installation wizard window. The window title is "Autodesk® AutoCAD® 2016". The main heading is "AUTODESK® AUTOCAD® 2016". The current step is "Install > Product Information".

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

The "License Type" section has two radio buttons:

- Stand-Alone
Use a license on the workstation
- Network
Use a license from my network

The "Product Information" section has two radio buttons:

- I want to try this product for 30 days
- I have my product information

Below the "I have my product information" option, there are two input fields:

Serial number: []

Product key: []

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

The background shows a Windows 8.1 desktop with a File Explorer window open to "This PC" and a taskbar at the bottom with various application icons and the system tray showing the time as 8:21 PM on 8/29/2015.

Install Step 6:

Select Autodesk

التصيب: الخطوة 6:

اختر اوتوديسك

Back Audio Video Subtitle Tools View Help

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

Autodesk

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: Disk space: 3.64 GB required / 143 GB available

[Installation Help](#) | [System Requirements](#) | [Readme](#)

Install Step 7:

Wait until Completion of installation

التنصيب: الخطوة 7:

انظر اكتمال التنصيب

ck Audio Video Subtitle Tools View Help

The screenshot displays the Autodesk AutoCAD 2016 installation progress window. The window title is "AUTODESK® AUTOCAD® 2016". The main content area shows "Microsoft Visual C++ 2008 SP1 Redistributable..." with an "Installing..." progress bar. Below this is a large 3D rendering of a red and white spherical structure. At the bottom, there is an "Overall progress..." bar showing "19 of 20 remaining" and a "Cancel" button. The background shows a Windows File Explorer window with a sidebar listing various folders like Desktop, Documents, Downloads, etc.

Install Step 8:

Press Launch Now

التنصيب: الخطوة 8:

اضغط اطلق الان

Autodesk® AutoCAD® 2016

AUTODESK® AUTOCAD® 2016

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

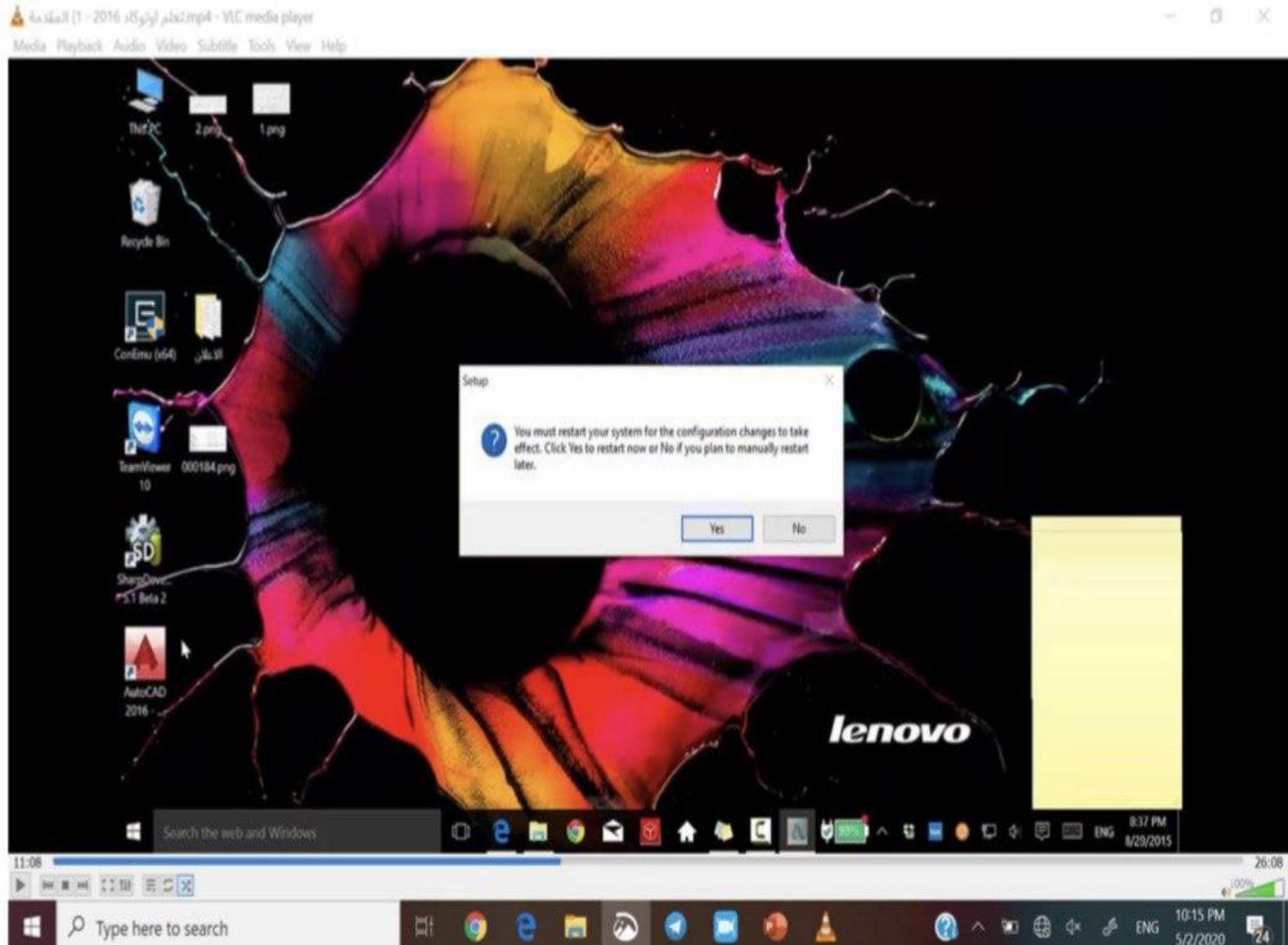
Launch Now

Install Step 9:

Restart you computer

التنصيب: الخطوة 9:

اعد تشغيل الحاسوب



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

Autodesk AutoCAD 2016 - STUDENT VERSION

Home Invent 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 CREATE

Search the web and Windows

11:30

26:08

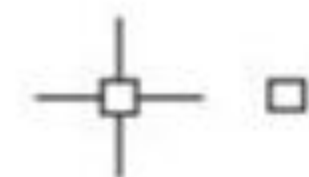
9:07 PM 8/29/2015

10:20 PM 5/2/2020

الفأرة (الماوس)

The Mouse

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



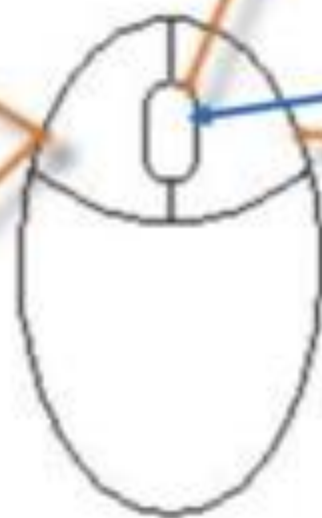
select objects
اختر احد الموجودات

specify locations
حدد الموقع



pan and zoom
امسك او قرب او ابعد

قوائم مختصرة
shortcut menus



لوحة المفاتيح

Escape

اوقف الامر Stop Command

Back Space

Delete input

احذف

Delete امسح

Delete Element or more امسح العنصر

Delete Line, Circle, امسح الخط او الدائرة

الانتقال Tab

Important

Key

Can be used to Jump from input to input

انتقل من خانة الى خانة



Control Important; many tasks

اختر Ctrl+A : Select All
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+ نقطة .

عدة مهام Few tasks

ادخل Enter

Very Important

To Execute any command

لتنفيذ اي امر اضغط ادخل

File Window Help

Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps

Line Polyline Circle Arc

Modify

Text Dimension

Layer Properties

Insert

Properties

Groups

Utilities

Clipboard

Base

Start

Drawing1

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

فتح ملف جديد

الملفات السابقة

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

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

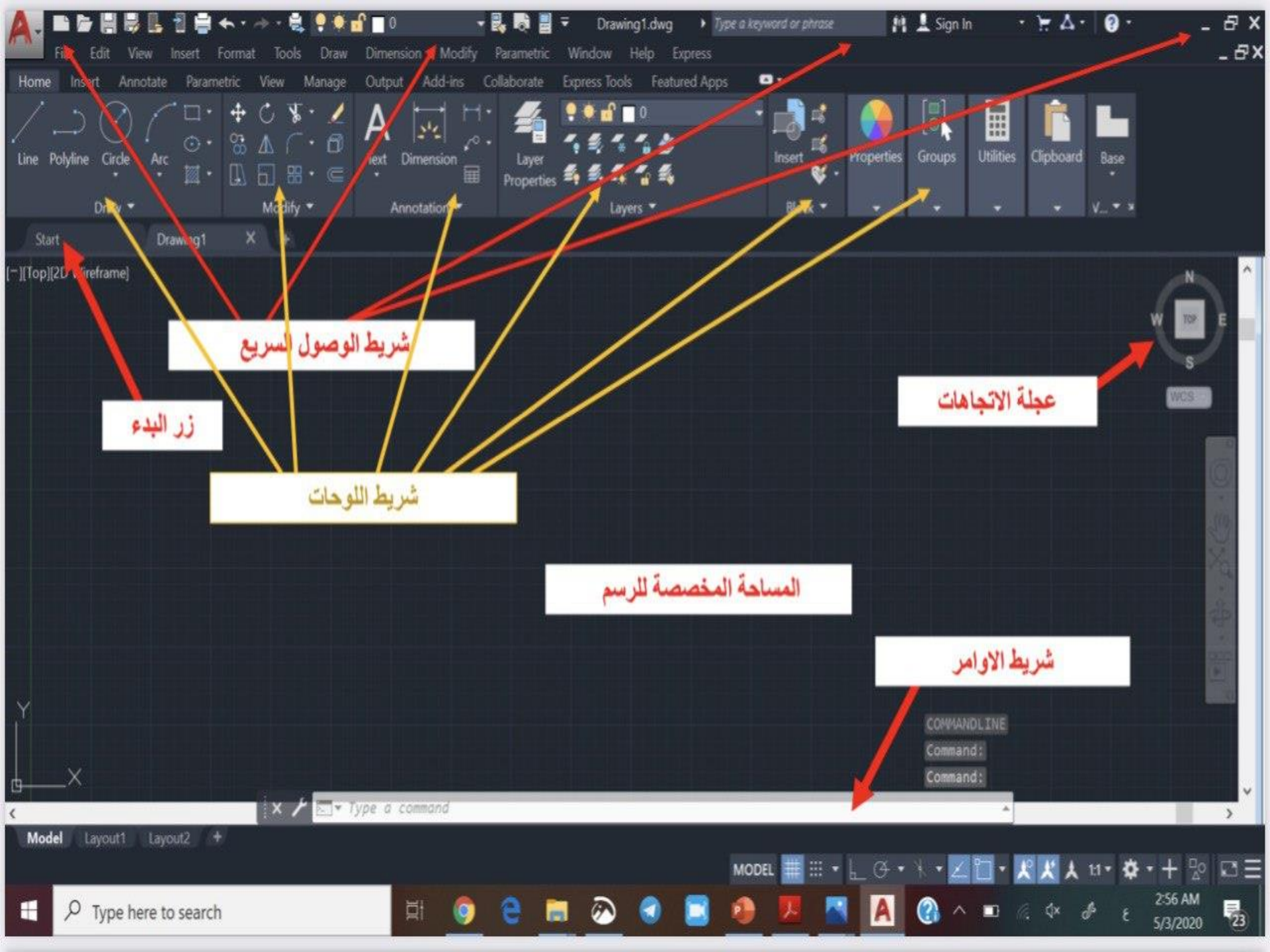
Sign In...

Send Feedback

فتح ملف سابق من الحاسوب

فتح قالب جاهز

نماذج رسومات



شريط الوصول السريع

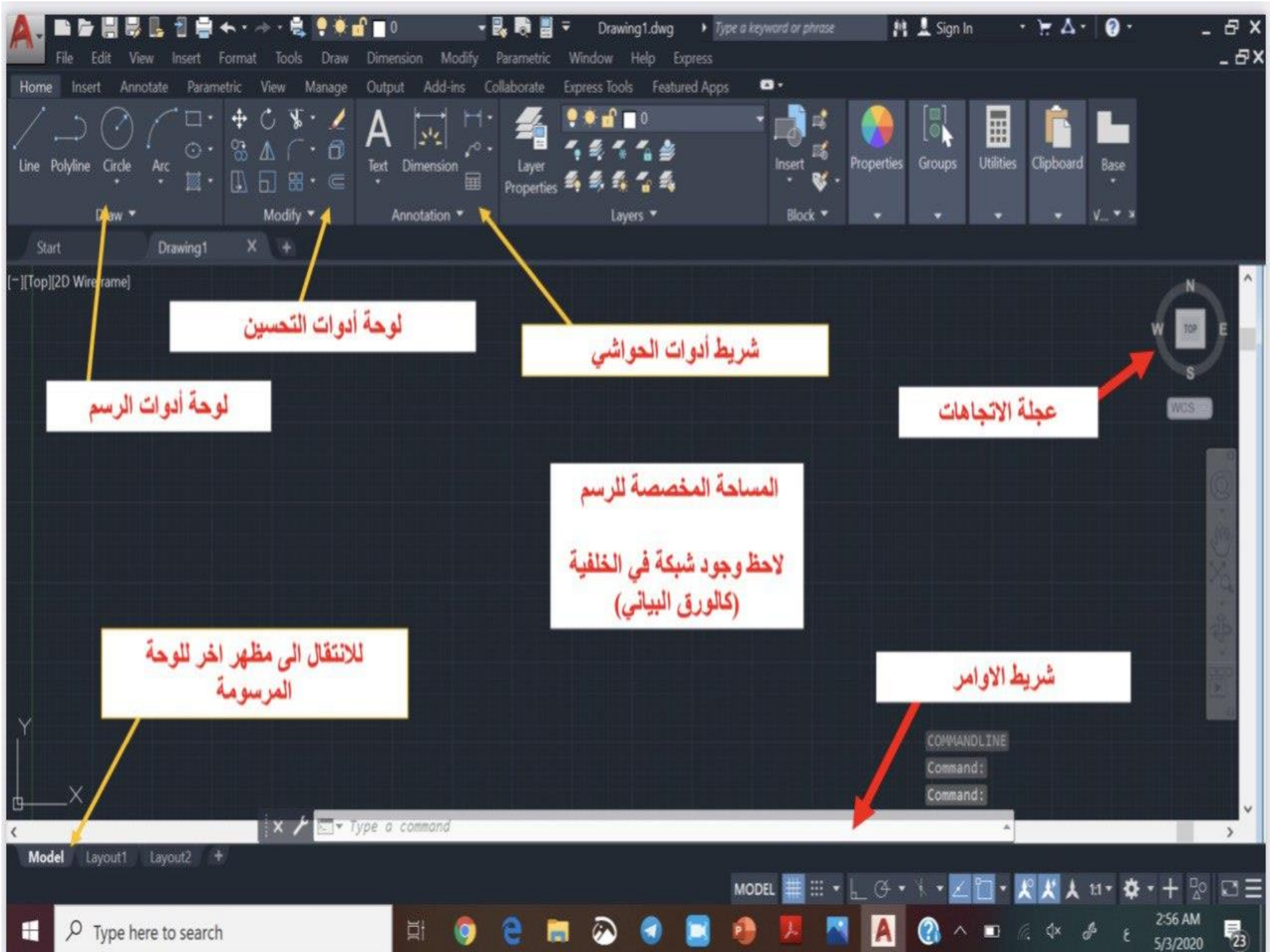
زر البدء

شريط اللوحات

المساحة المخصصة للرسم

شريط الاوامر

عجلة الاتجاهات



لوحة أدوات التحسين

شريط أدوات الحواشي

لوحة أدوات الرسم

عجلة الاتجاهات

المساحة المخصصة للرسم

لاحظ وجود شبكة في الخلفية
(كالورق البياني)

للانتقال الى مظهر اخر للوحة
المرسومة

شريط الاوامر

COMMANDLINE

Command:

Command:

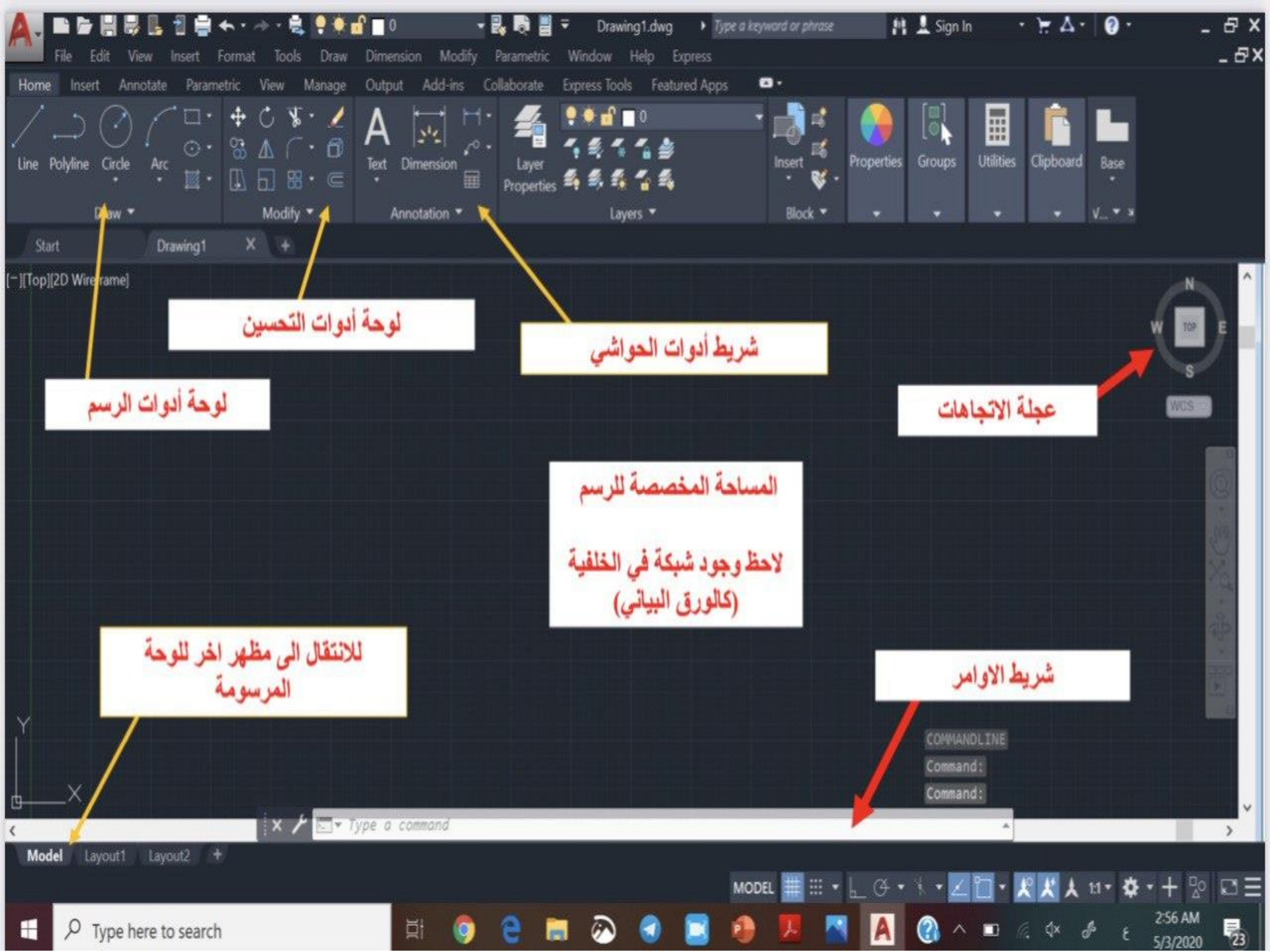
Model Layout1 Layout2

MODEL

2:56 AM

5/3/2020

23



لوحة أدوات التحسين

شريط أدوات الحواشي

لوحة أدوات الرسم

عجلة الاتجاهات

المساحة المخصصة للرسم

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المرسومة

شريط الاوامر

COMMANDLINE
Command:
Command:

Remarks

The Units: الوحدات

No UNITS are required in AutoCad

الايوتوكاد 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 الاوتوكاد هو 1:1
هذا المقياس يكون اثناء الرسم
و لكن يمكن استخدام مقياس الرسم المناسب للطباعة و حسب حجم ورق الطباعة