

Republic of Iraq
Ministry of Higher Education
and Scientific Research
Al-Mustaqbal University College
Computer Engineering Techniques Department



Automatic Aided Design

"AUTOCAD"

Stage: 1

Lecture One

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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

ملاحظة 1: محتوى هذه المحاضرة ليس للحفظ و الغرض منها هو تعليم الطالب بعض اساسيات البرنامج

ملاحظة 2: يتم شرح النقاط المشار اليها بالتفصيل في الفيديوات المتعلقة بهذه المحاضرة.

What is CAD?

Autodesk®

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)

- 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/education/home)

- AutoCAD
- Architecture
- Mechanical
- Revit
- Inventor
- Civil
- MEP
- etc.

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



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 جدا
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 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 sidebar on the left contains navigation links: "Education home", "Free software", "Learn & teach", "Competitions & events", "Prepare & inspire", "Support", and "About Autodesk Educa...". A "FEEDBACK" button is located on the right side of the page. At the bottom, a taskbar shows the time as 8:08 PM on 8/28/2015.

AutoCAD Free Download

www.autodesk.com/education/free-software/autocad#

AUTODESK

SEARCH MOSTAFA ALI SIGN OUT MENU

Home : Education : Free software

Education: Downloads
AUTOCAD

Free software download for students & educators

Education home

Free software

Learn & teach

Competitions & events

Prepare & inspire

Support

About Autodesk Educa...

FEEDBACK

AutoCAD

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.

Learn more Get the full suite

<http://www.autodesk.com/education/free-software/autocad>

8:08 PM 8/28/2015

Install Step 2:

Press Setup.exe

التنصيب: الخطوة 2:

اضغط على ايقونة تنصيب

ck 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...
- Left sidebar: Quick access (Desktop, Documents, Box Sync, Downloads, Pictures, Dropbox, CAD_YouTube, IEEE1516-2010, lib, الاعلان), OneDrive, This PC (Desktop, Documents, Downloads, Music, Pictures, Videos), Windows8_OS (C:), LENOVO (D:), New Volume (E:), New Volume (F:).
- Main pane: A 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

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

15 items 1 item selected 958 KB

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

Back Next Cancel

Installation Help | System Requirements | Readme

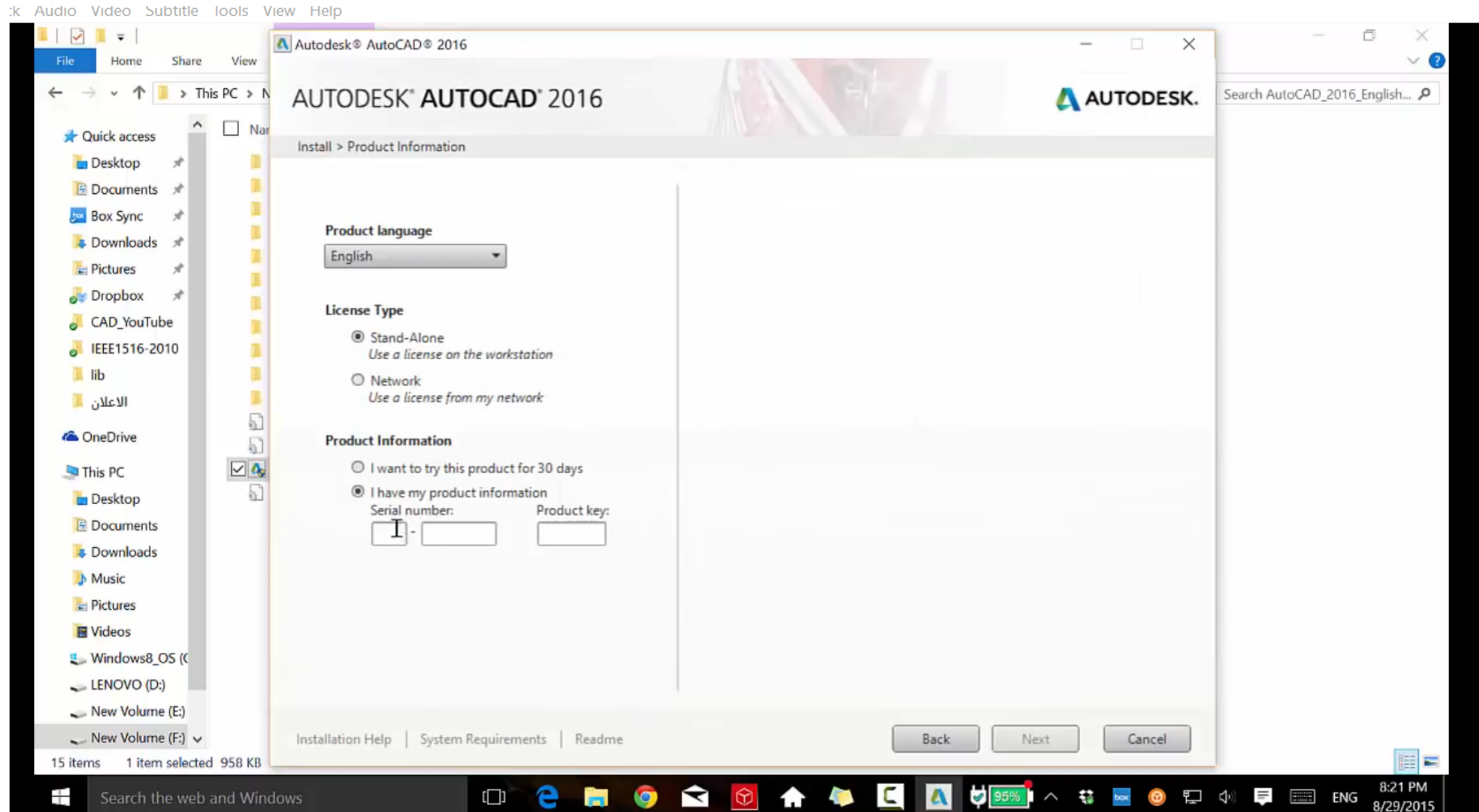
15 items 1 item selected 958 KB

Search the web and Windows

8:21 PM
8/29/2015

**Install Step 5:
Input Serial Number**

**التنصيب: الخطوة 5:
ادخل الرقم التسلسلي**



Install Step 6:
Select Autodesk

التنصيب: الخطوة 6:
اختر اوتوديسك

Back 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

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

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:

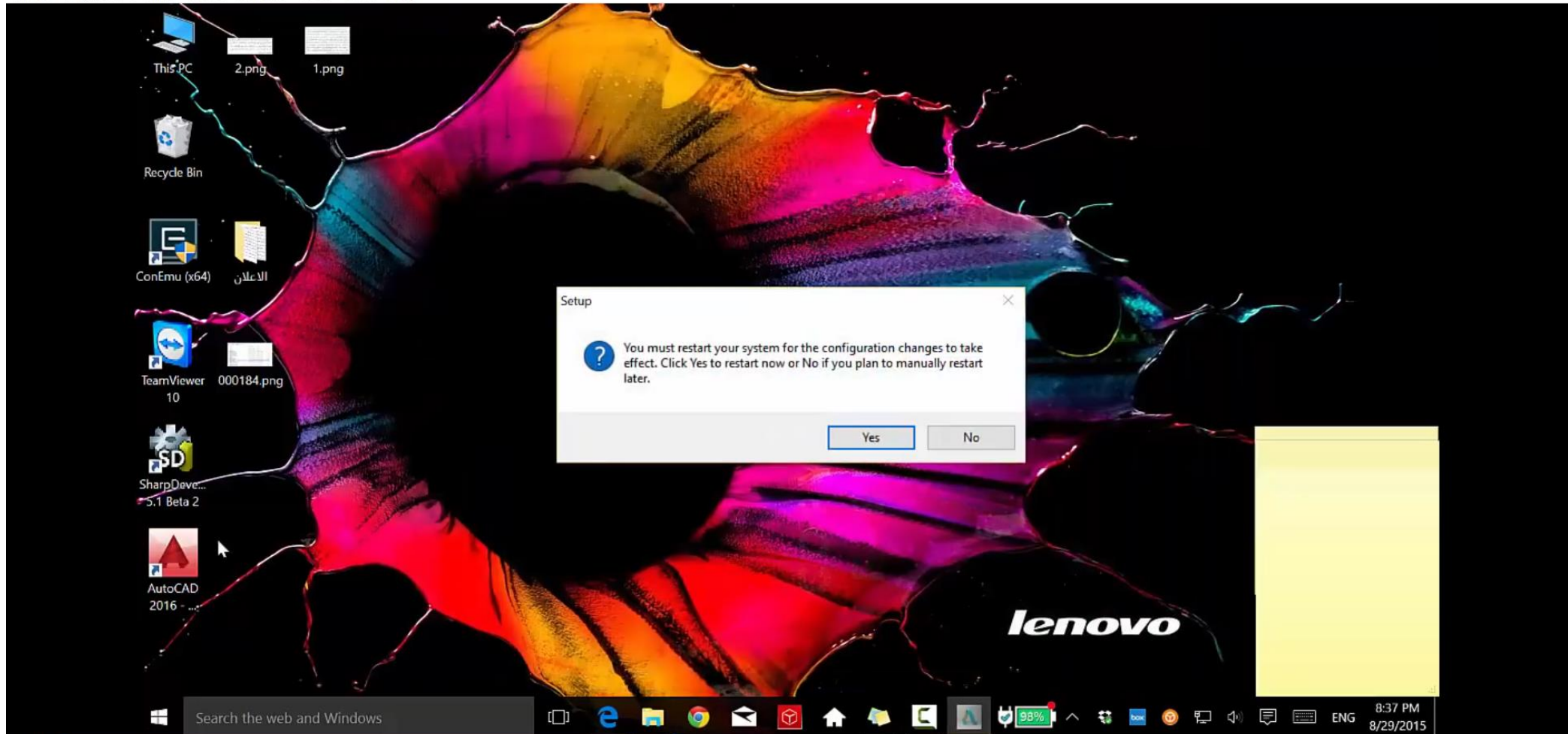
Restart you computer

التنصيب: الخطوة 9:

اعد تشغيل الحاسوب

المقدمة (1 - 2016.mp4 - VLC media player

Media Playback Audio Video Subtitle Tools View Help



11:08

26:08



Type here to search



10:15 PM
5/2/2020



Install Step 10:

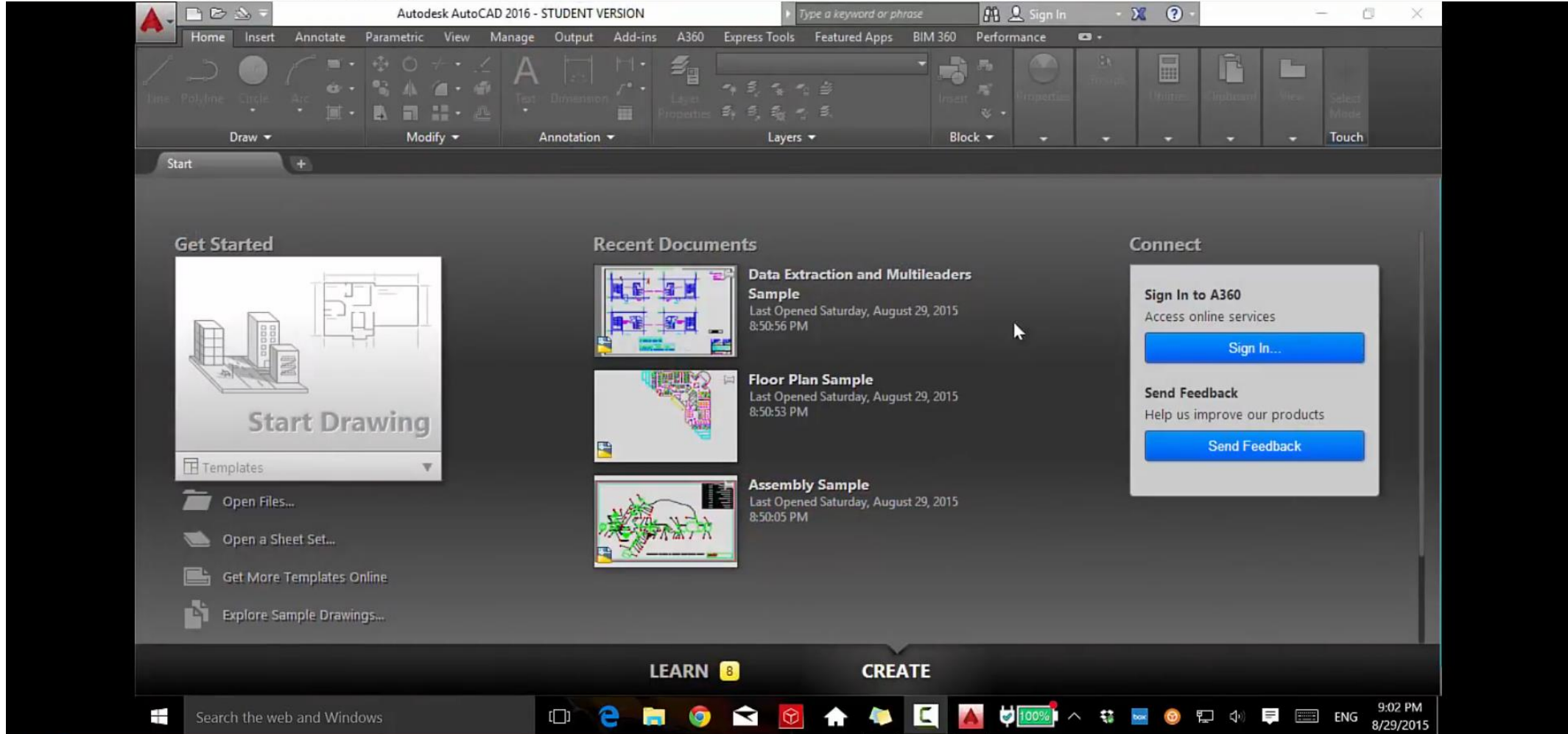
If you press on the icon of run you will get this interface

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



11:30



26:08



Type here to search



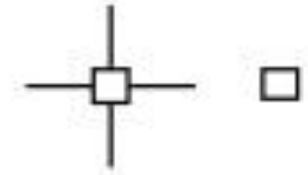
10:20 PM
5/2/2020



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

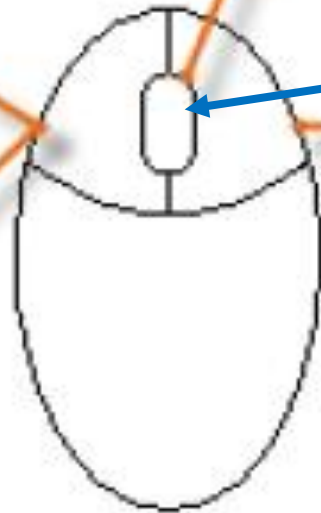


pan and zoom

امسك او قرب او ابعد

قوائم مختصرة

shortcut menus



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

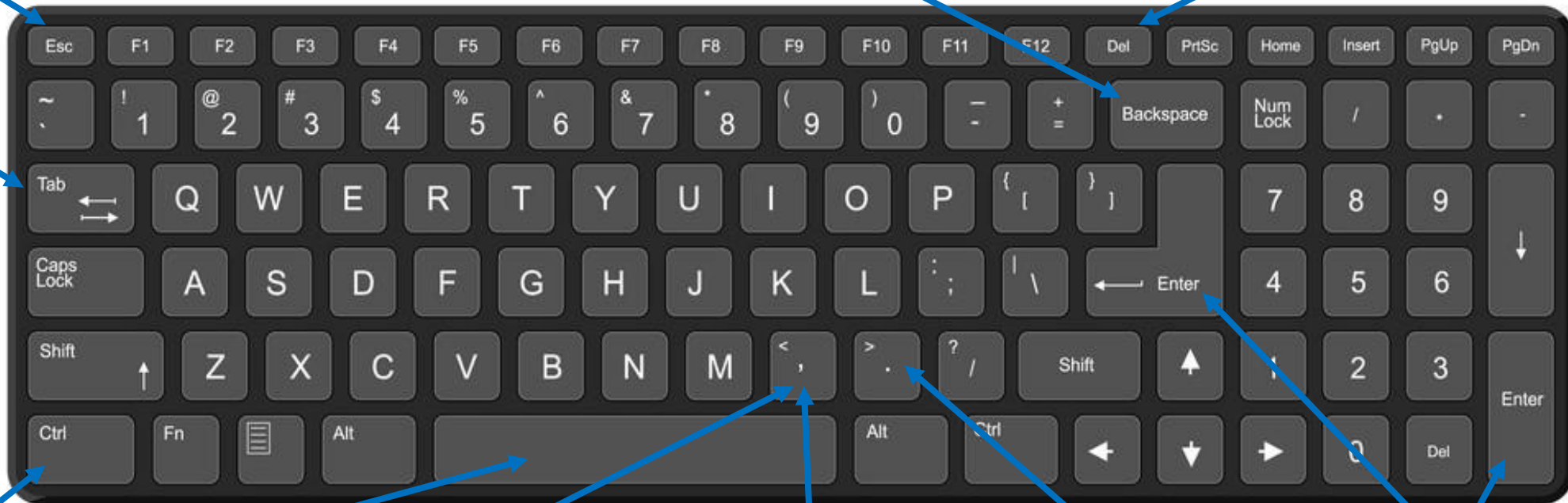
الانتقال Tab

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

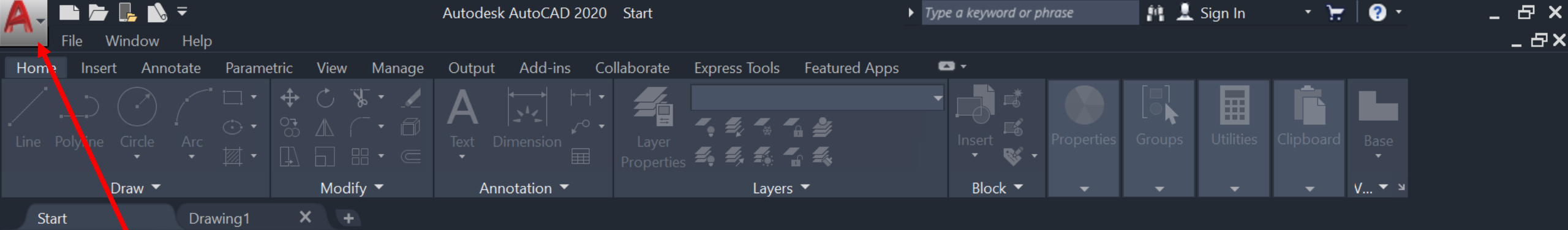
عدة مهام Few tasks

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](#)

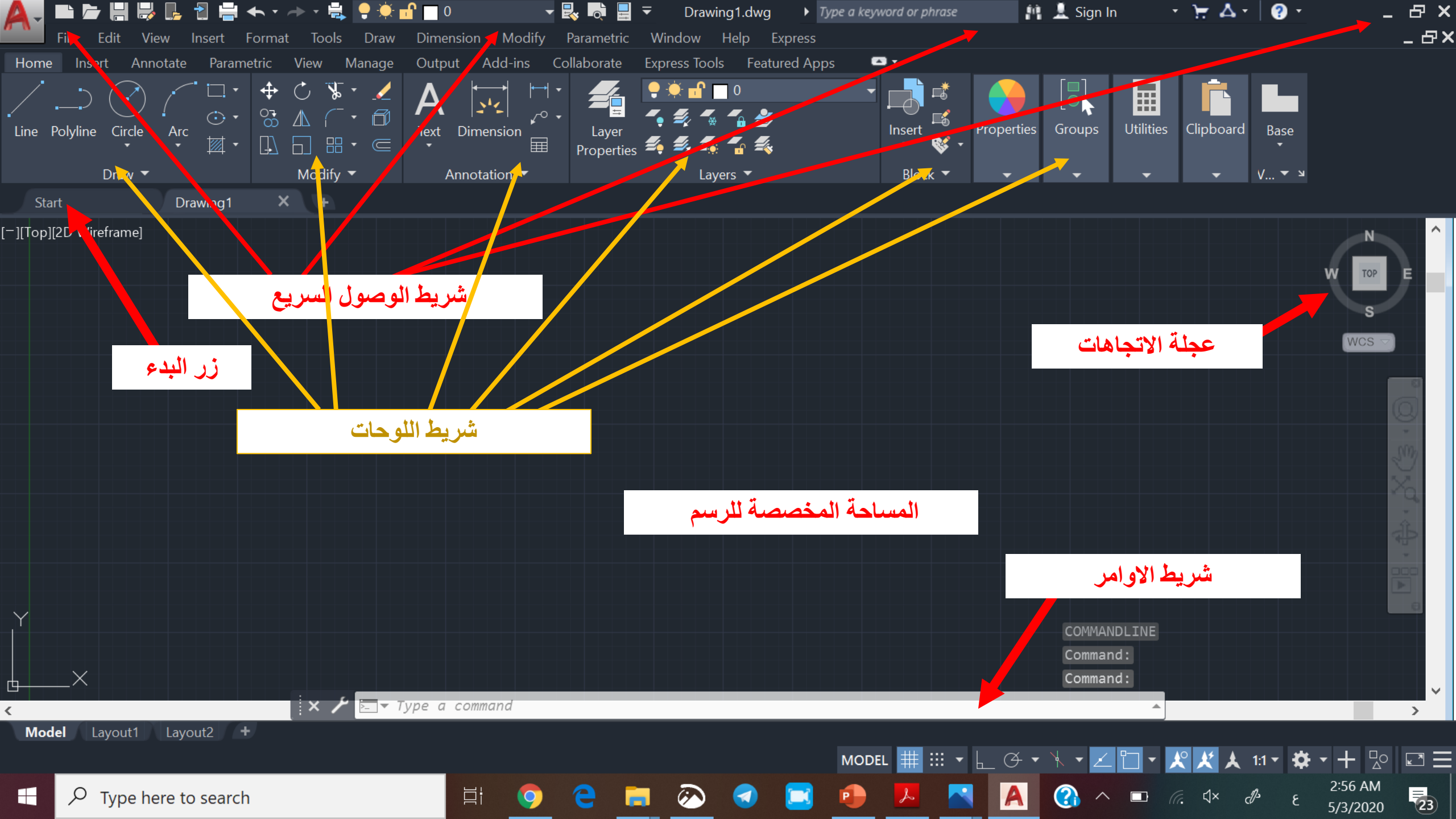
فتح قالب جاهز

نماذج رسومات

Connect

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

Send Feedback
Help us improve our products



شريط الوصول السريع

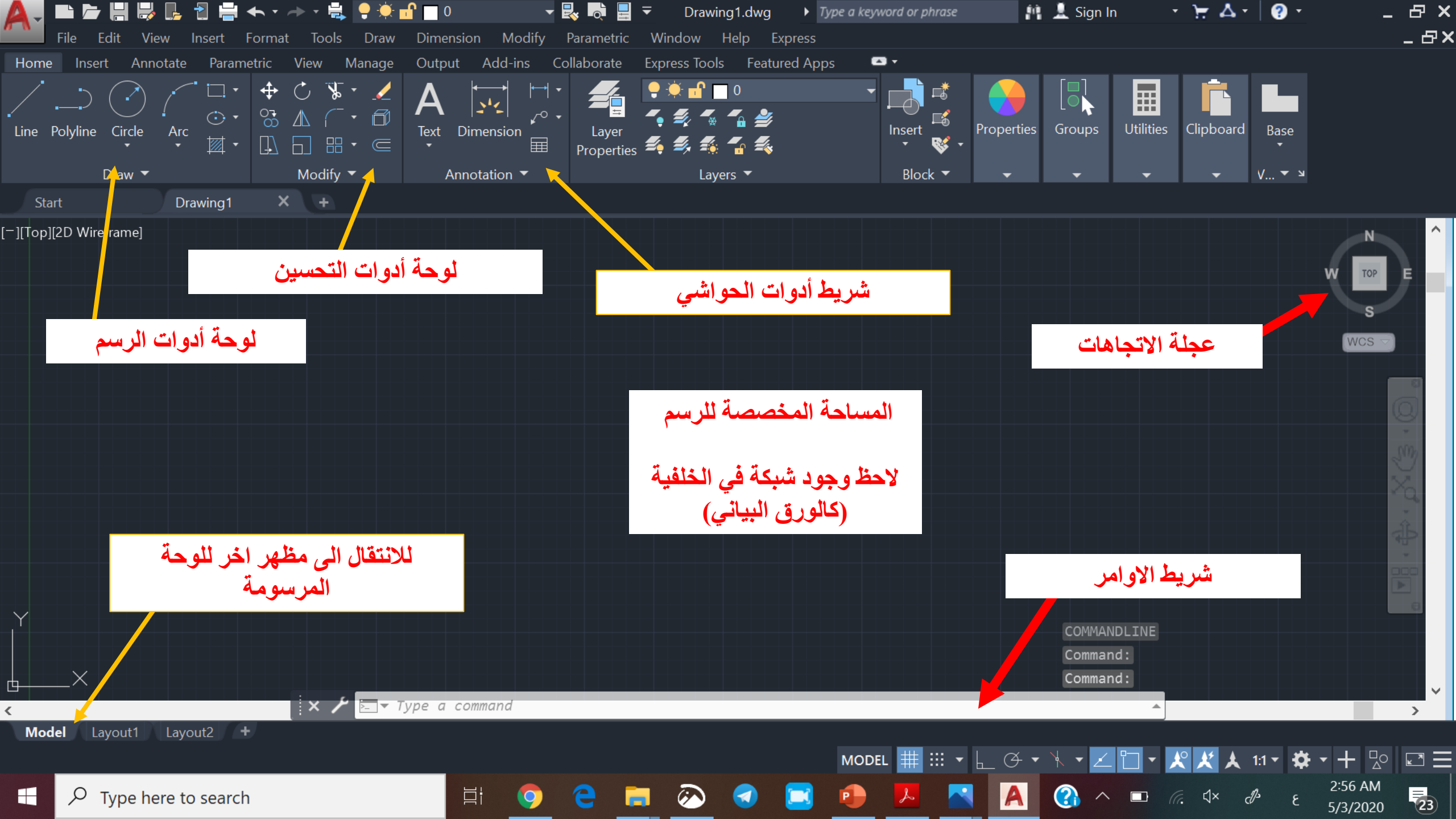
زر البدء

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)

لانتقال الى مظهر اخر للوحة
المرسومة

شريط الاوامر

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