How to generate an input file from a classroom's CAD file using AutoCAD

In this tutorial, we will discuss how to generate an input file for the socially-distanced classroom layout designer. For a classroom with fixed seating, the input files for that code require the location of the seats within a classroom. This tutorial describes how

Before we get started, you will need:
- AutoCAD
  - This tutorial describes the steps for AutoCAD 2018, but the same steps should apply for other versions as well
  - Note: AutoCAD offers a one-year free subscription to students.
- The CAD file for the classroom you would like to create a layout for

What you will create:
- A .csv file with
  - The (x,y) coordinates of the seats within a classroom
  - The location of other features in classroom that should be avoided (e.g., aisles, doors, instructor position)

How to Extract Coordinates from a CAD File using AutoCAD

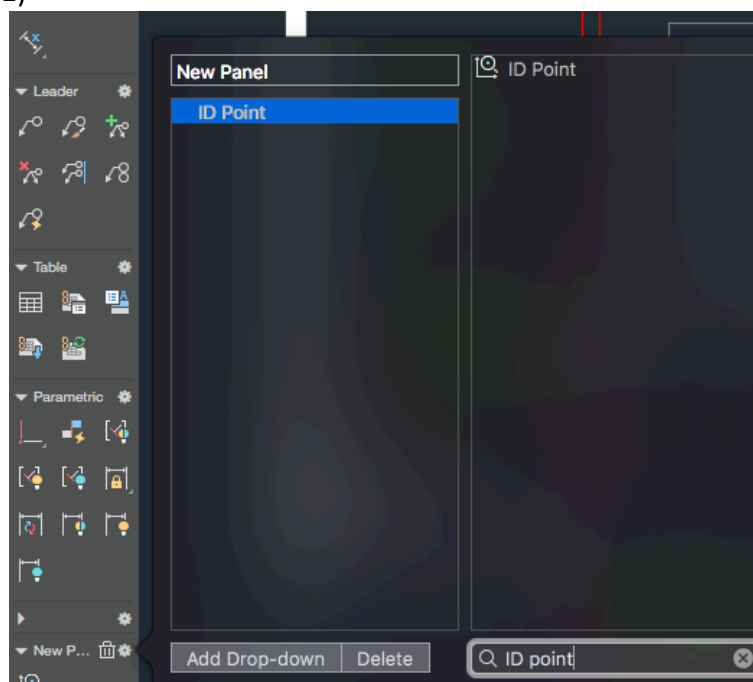1- Go to home tab > utilities panel > ID point or search for ID point in the new panel tab (see figure 1)

Figure 1: Search ID point from new panel

2- Make sure to click the setting icon in the tab below and choose coordinates (see figure 2). This will make the coordinates appear in the Command panel.
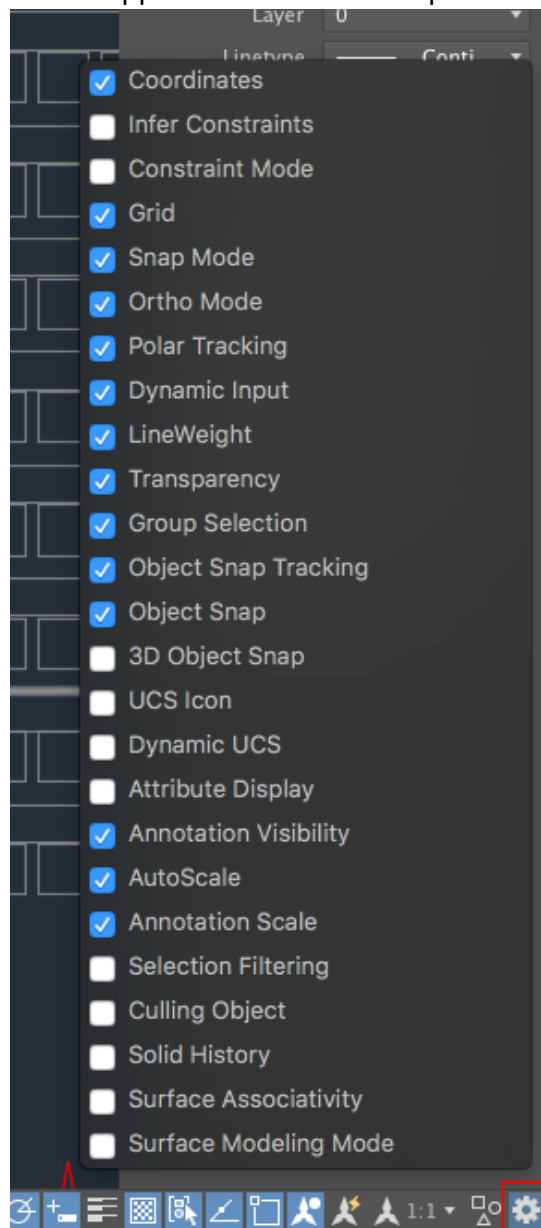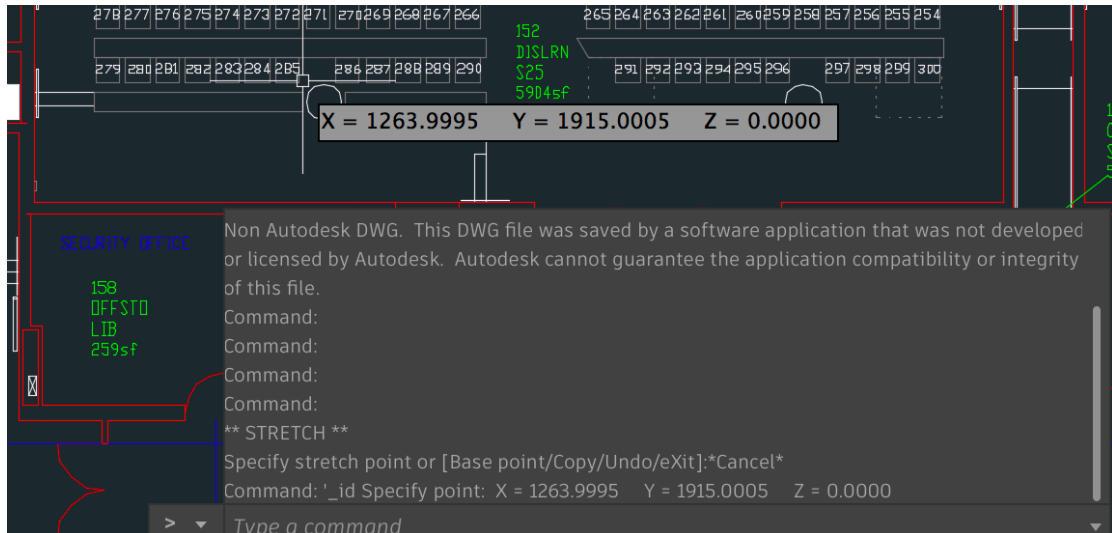

Figure 2: Click settings and choose coordinates

3- Use ID point to click on the point you want its coordinates and you should see them appear in the command panel.

Figure 3: Coordinates in the command panel after clicking on point 285

4- Another straight-forward way to get any coordinates of any drawing now just move the mouse pointer to the point you want, and you should see the coordinates in the bar below

Figure 4: Coordinates of a specific point

However, these numbers will change as you move the pointer. So, in order to freeze it just click on them.

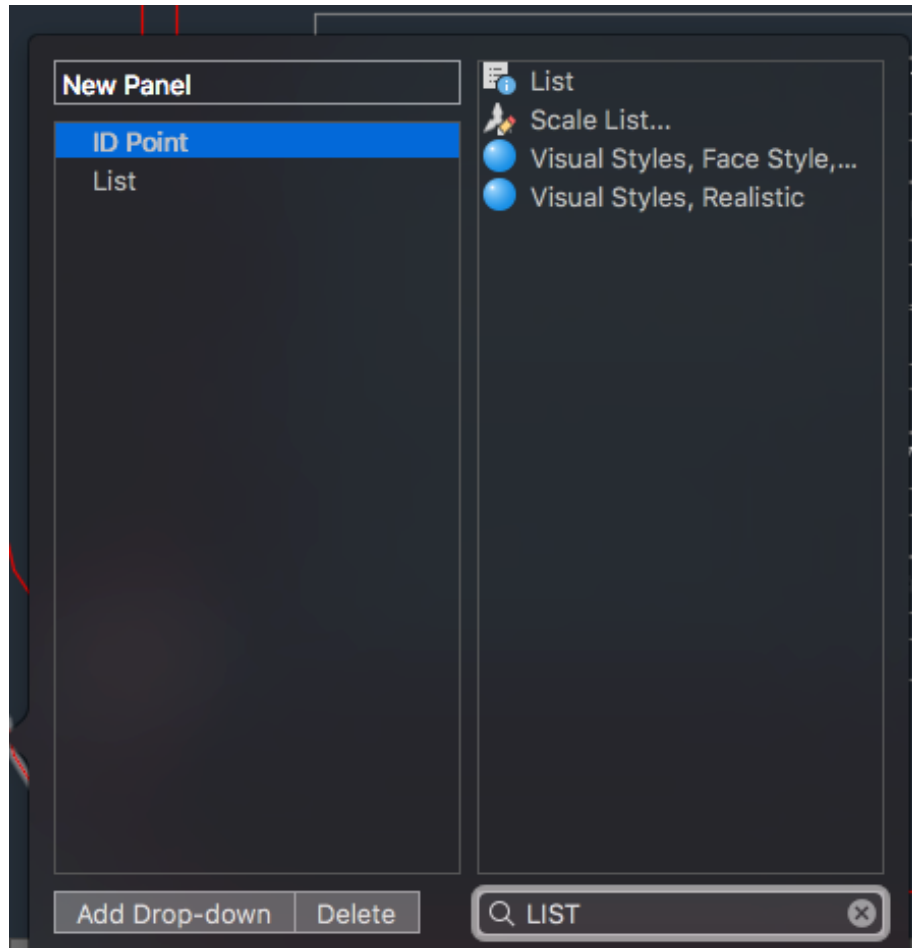5- To get the coordinates for more than one point at once, search the LIST in the new panel tab

Figure 5: LIST in the new panel tab

6- Pressing command (if using MacBook) or Control (if using Windows) and select all the points you want their coordinates and then click LIST. You should get all the coordinates either on a command panel or in a separate window.
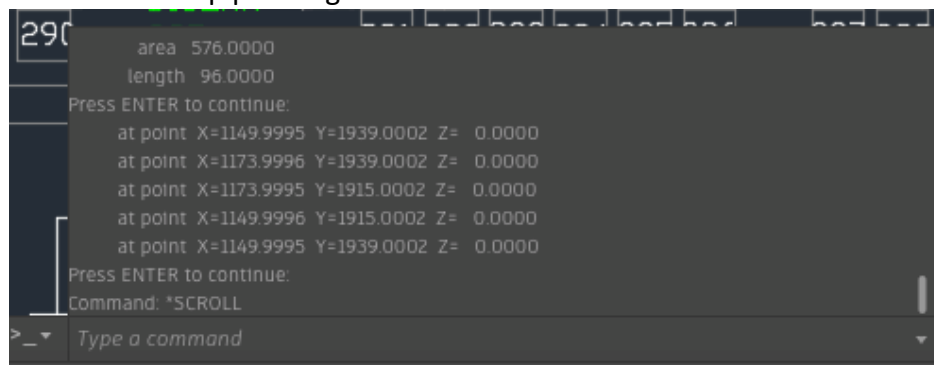Note: you'll have to keep pressing Enter until it shows "Command"

Figure 6: Coordinates of five points

7- From here you can copy all the coordinates to an excel sheet. You can use Text to column in Data tab to help you organize the coordinates better.