Technical Report: 2D Drawing of Porsche 911 GT3 CUP 991

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EEE 154: Introduction to Engineering Drawing, Section 7

Group: E

Introduction: In this report, a drawing of a Porsche 911 GT3 CUP 991 will be designed according to a particular dimension. The car has several views which we will be replicating in our group. I will be doing the left facing part of the car. First, we collected an image (given below) which I used as a source to determine the dimensions and then make a drawing. Finally, I created a PDF file which will contain the overall sketch of my part.
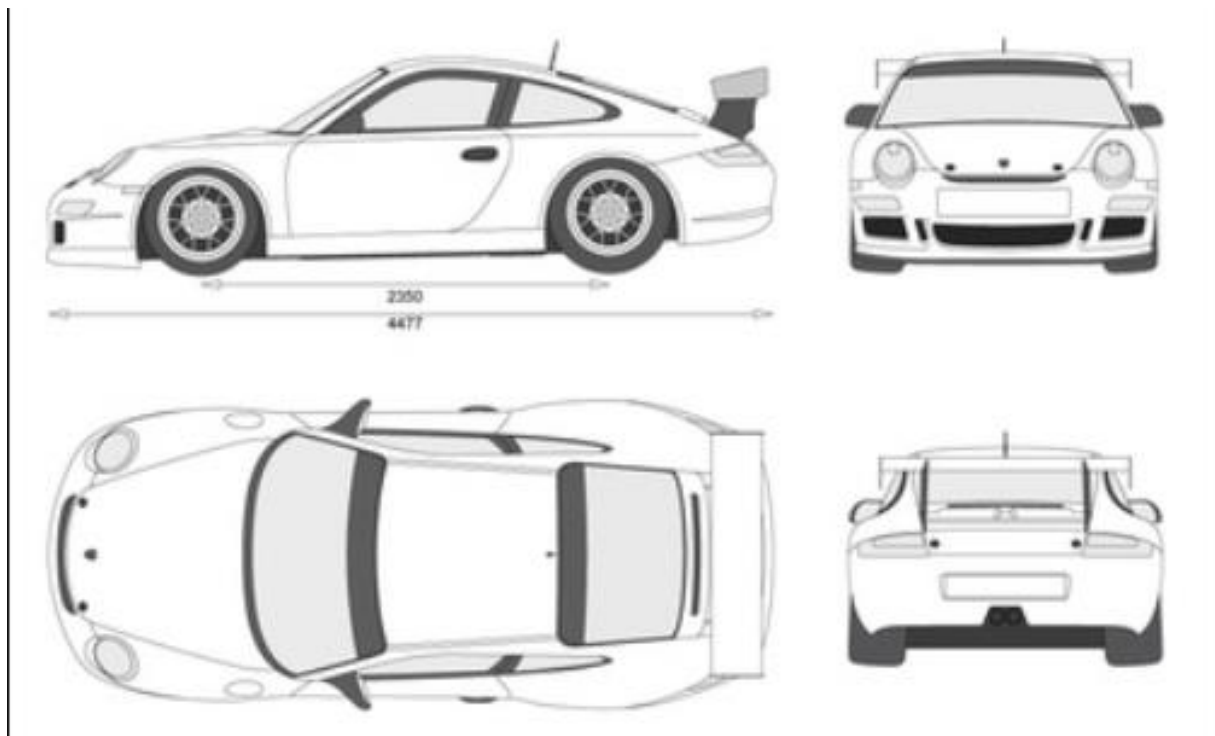
Step 1 – Determine a rough dimension of the sketch: First of all, I selected the (Drafting and Annotation Workspace). Then taking the image of my part I developed a rough dimension of the model taking help from a trusted websites (https://www.the-blueprints.com/blueprints/cars/porsche/).
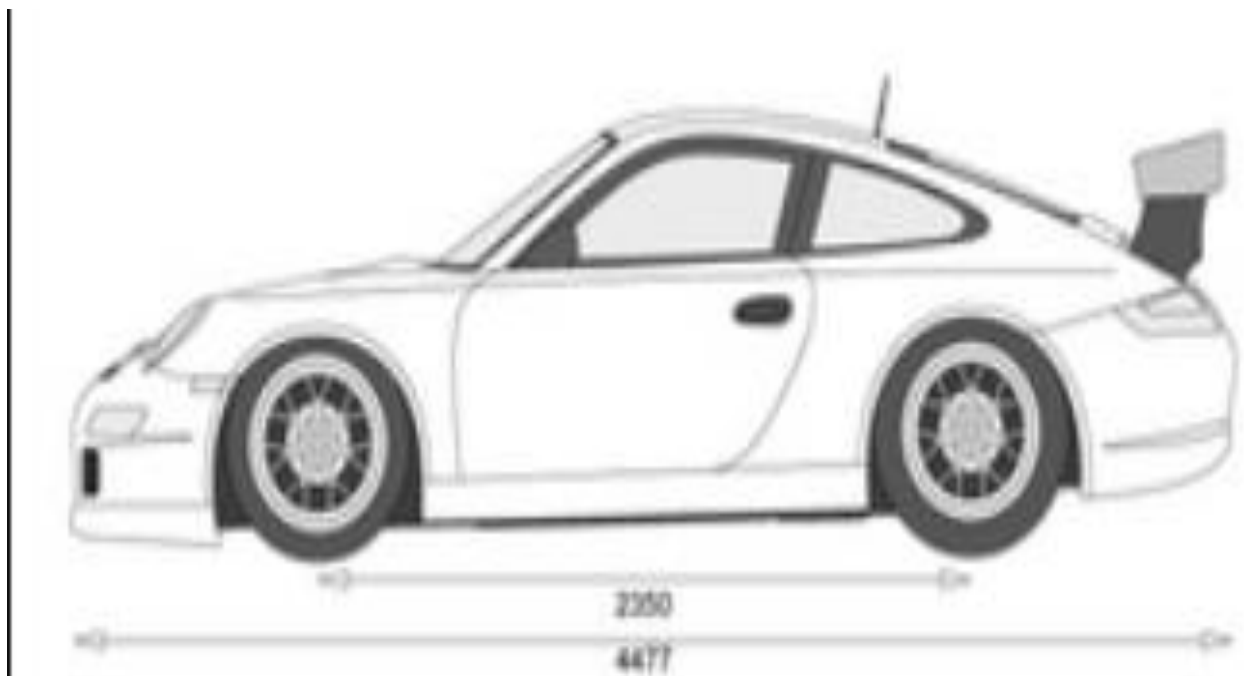
Step 2 – Select Layers: Layers are important. For this sketch I decided to have 2 layers. 1 layer for the overall sketch which is orange color and another for the construction layer. The layer options are shown in the figure below:
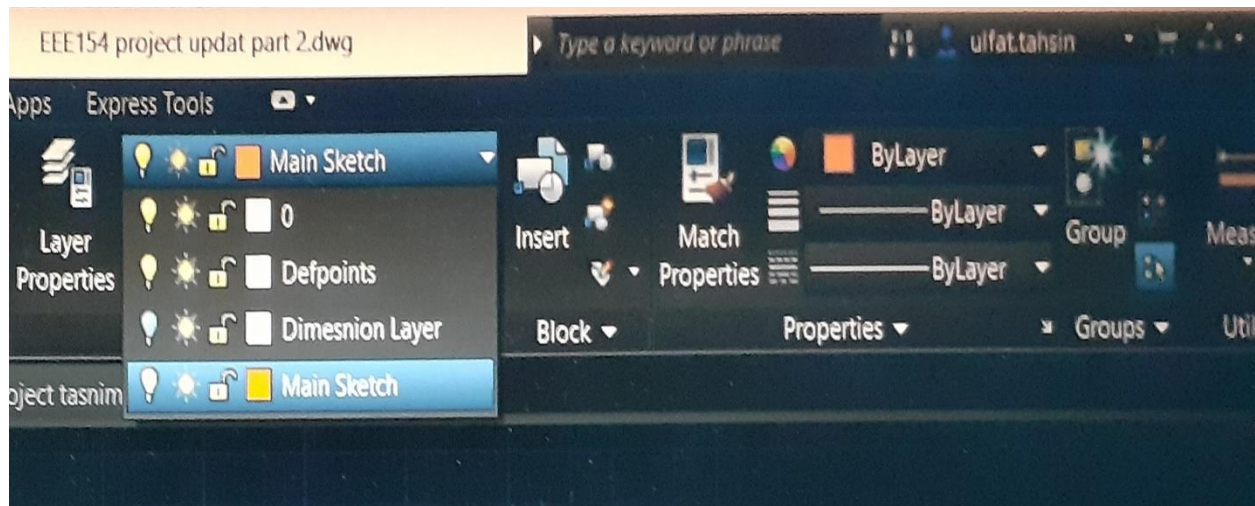

Step 3 – Sketch Build Up: To start the sketch I will need a few basic tools. The line tool for the straight line sketch, the 3 point arc for the curve lines, the circle for the wheels, offset tool, mirror tool, fillet tool, and the hatch work.
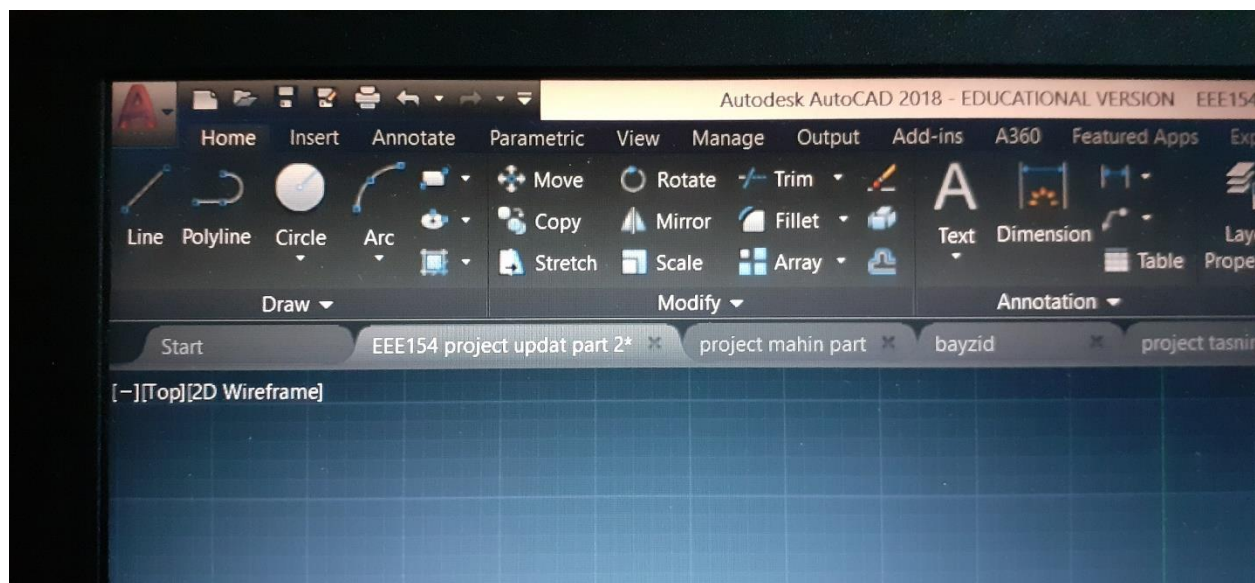
The drawing can be started from any position but better to start by building the base first. After that the front part. The front part consists of half circles and other curves and arcs. On the other parts I had to make some arcs and circles and trim tool was used to complete the shape formation. Offset was used at places where 2 parts of the model meets, to show the boundary a bit nicely and also it would make the model more realistic.

In the following next points I attached the ways I went through my part of the project along with the snapshots of a few phases.

In the following snapshot I'm showing the initial phase of the front part of the model:
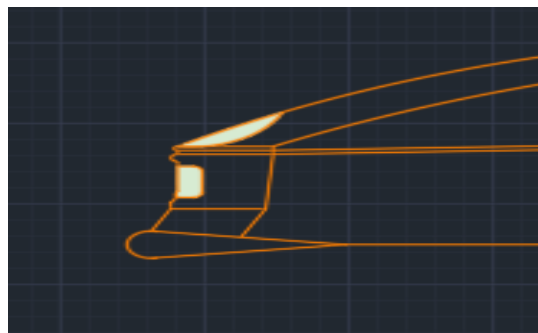

For the wind shield and the roof part of the model I used the arc tool and spline at one point. What spline does is creates a mountain type curved structure which kind of provides a s type shape required for many purposes. Spline is shown in the snapshot below:
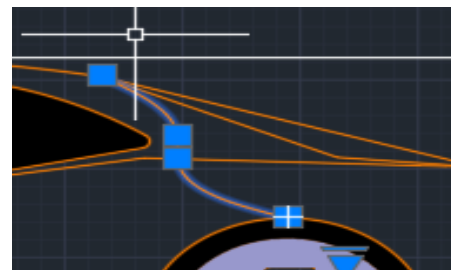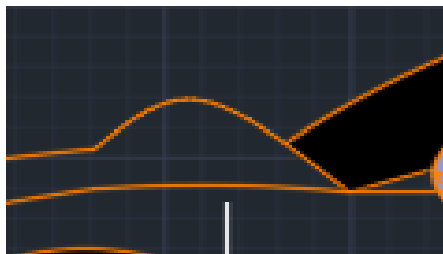
The wind shield and roof portion was initially having the follwing phase:
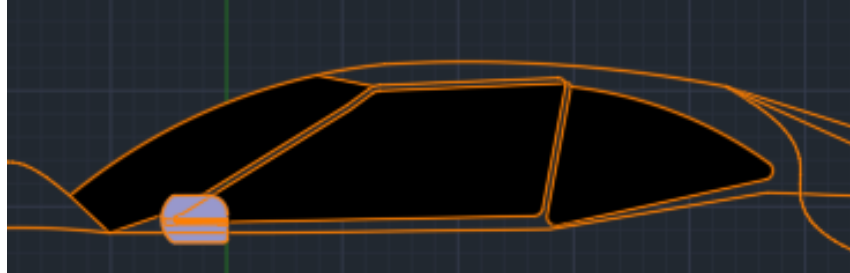
The back part consists of the spoiler and one of the wheels. The wheel was done pretty easily with the help of circle tool. The wheel contains some minor shapes inside. The shape was multiplied in number using polar array. Also the spoiler was done pretty simply. Just line works and a little bit fillet works to shape the edges. The work is shown below:
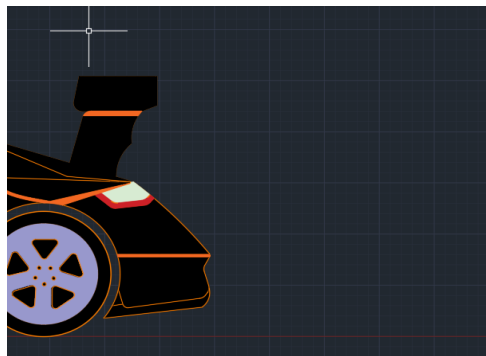
And the remaining parts i.e. the side mirror is a filleted rectangle after exploding and the lights are nothing but shapes filleted with a good looking white hatch portions.

Step 3 – File Export: Last but not the least, I will create a pdf version of the sketch, by selecting "PDF covert option" in the export part of main AUTOCAD drop down menu and also set the destination of the output file. The finalized PDF of the sketch is shown below: