E-PIV/FLOWCOACH DATA POST-PROCESSING INSTRUCTIONS

TABLE OF CONTENTS

1. Converting Data File to Tecplot Input File

1.1 Create a new folder. This will be the working folder and every file you need will be saved to it.

1.2 Open a text pad file and copy the velocity vector data you downloaded from the class website into the text pad file, then add the header:
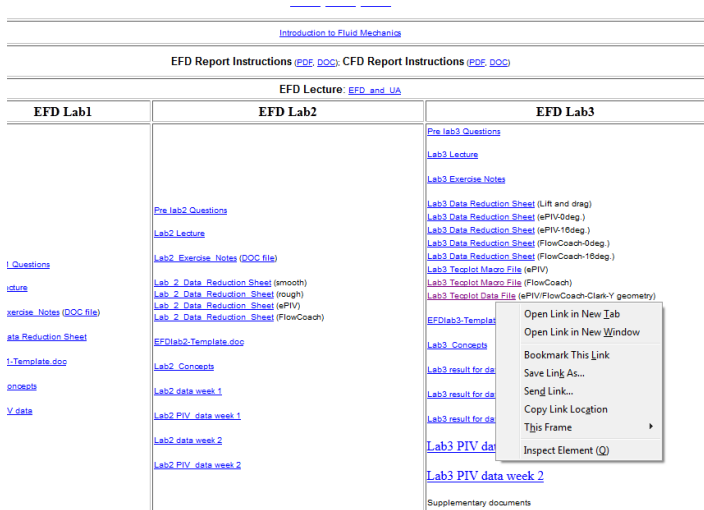
variables = x, y, u, v
zone i = 63, j = 47
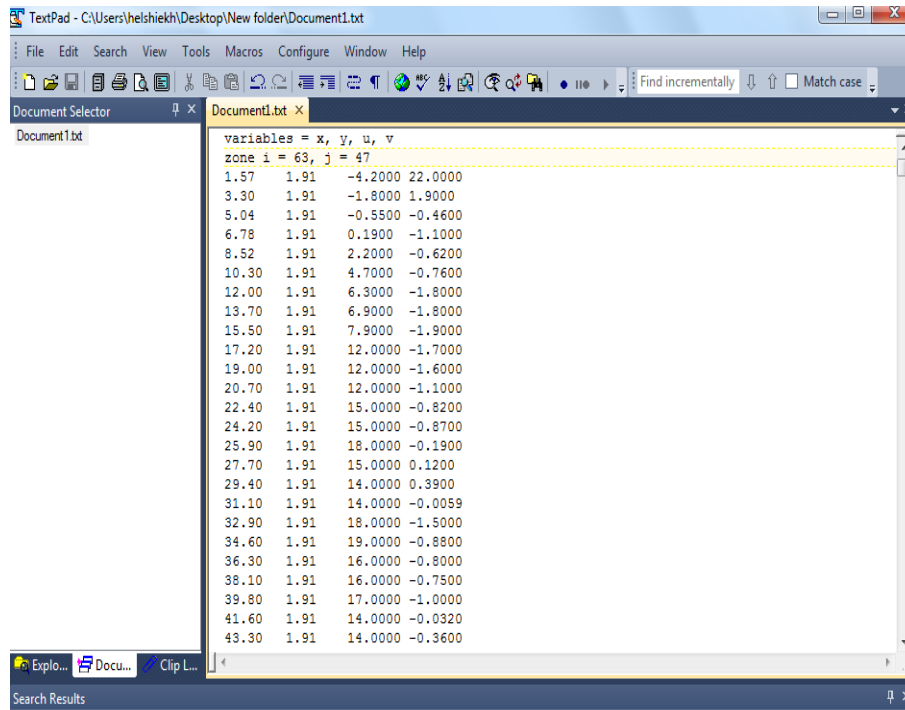
Save the text pad file to the new folder you created. Then click on file-rename and change the name from Document1.txt to velocity_vec.dat as shown below.

3
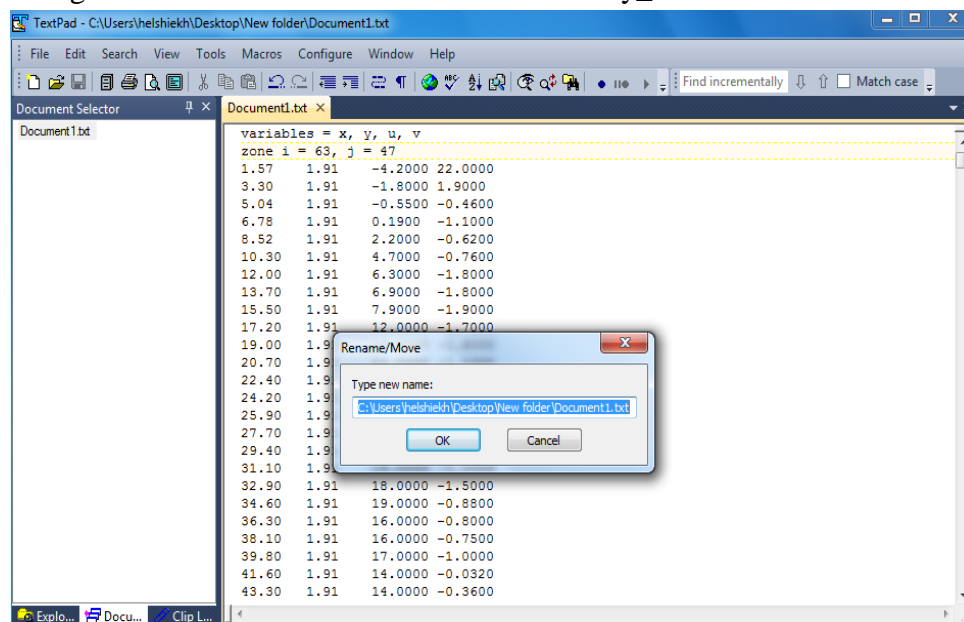
1.3 Right click on the flow coach Tecplot macro file and save link as to save the file to the created folder.
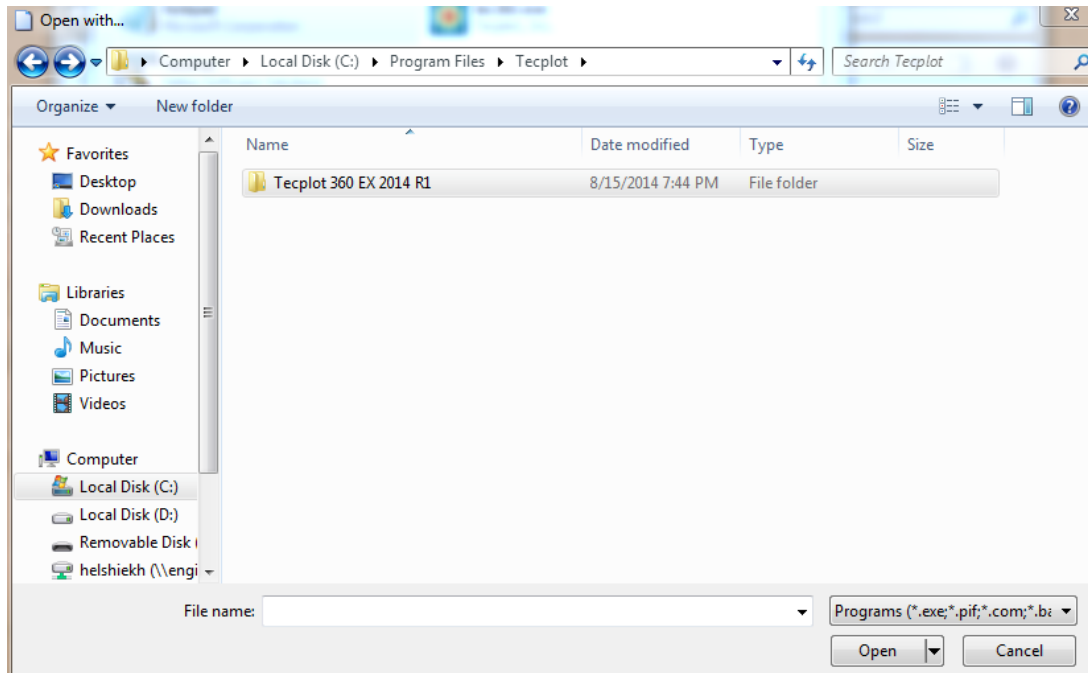

Make sure that the macro file will open with Tecplot 360 EX 2014R1.

If the Tecplot 360 EX 2014R1 is not the default opening program then follow the steps below to make it the default opening program.

Right click on the macro file then open with and browse and scroll down to click on tecplot

Then, open Tecplot 360 EX 2014R1 and click on bin and click on tec360.exe to choose Tecplot 360 EX 2014R1 as your default opening program.
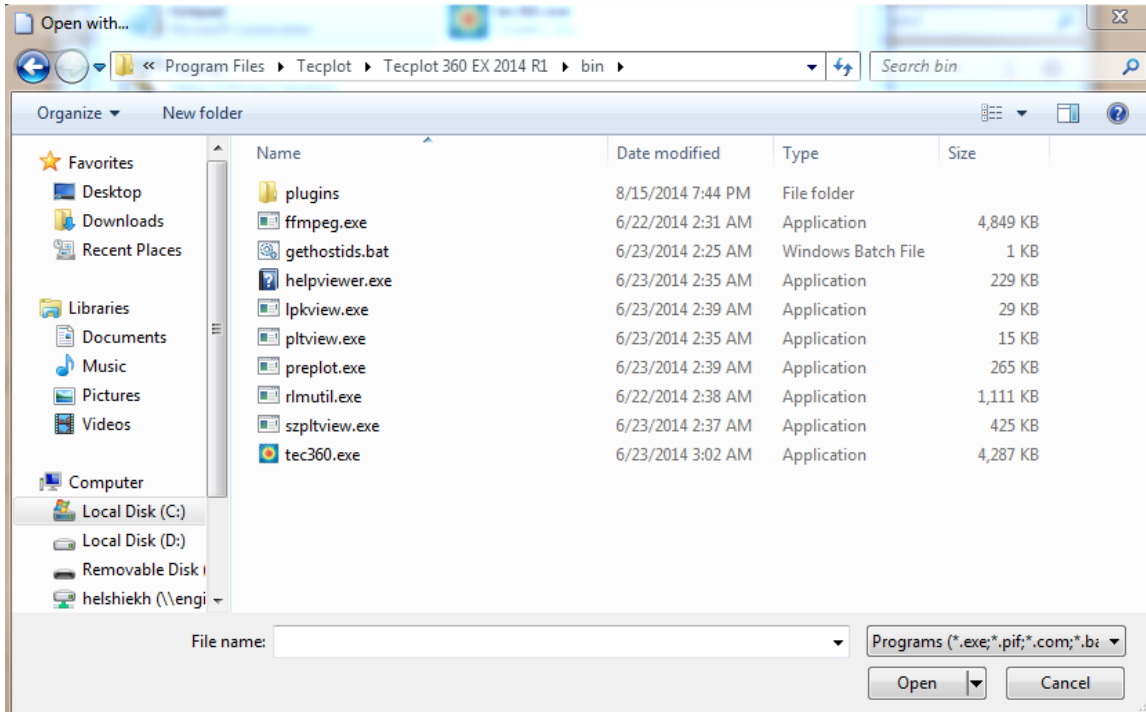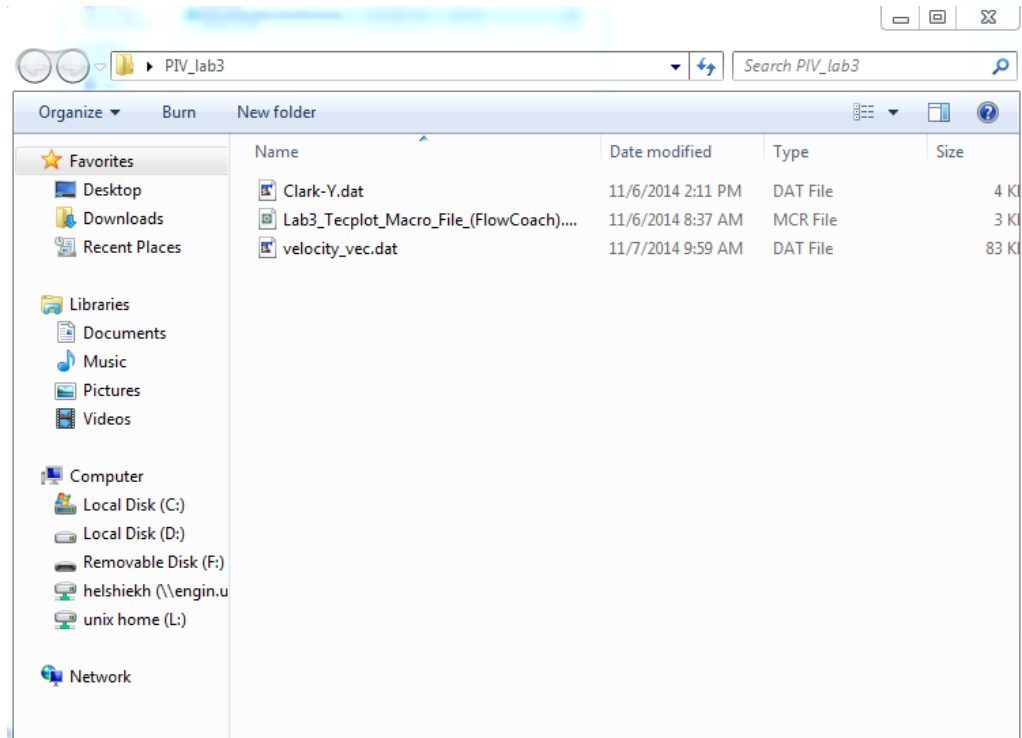

1.4 Right click on the Clark-y geometry lab3 Tecplot data file and save link as to save the file to the created folder.
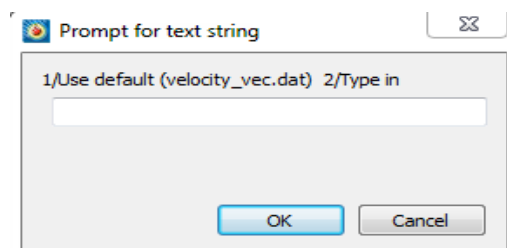
2.1 DATA POSTPROCESSING BY USING TECPLOT MACRO
FILES Open the working folder you have created in step one and
double click on the macro file.

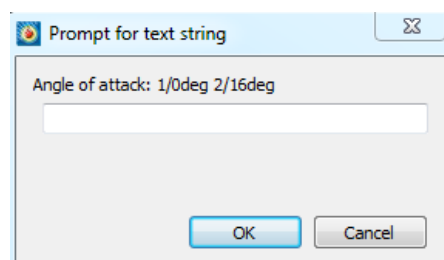
Answer to following three prompts:

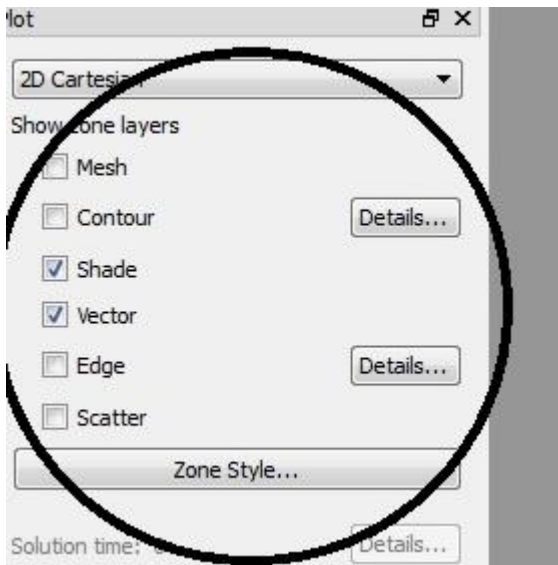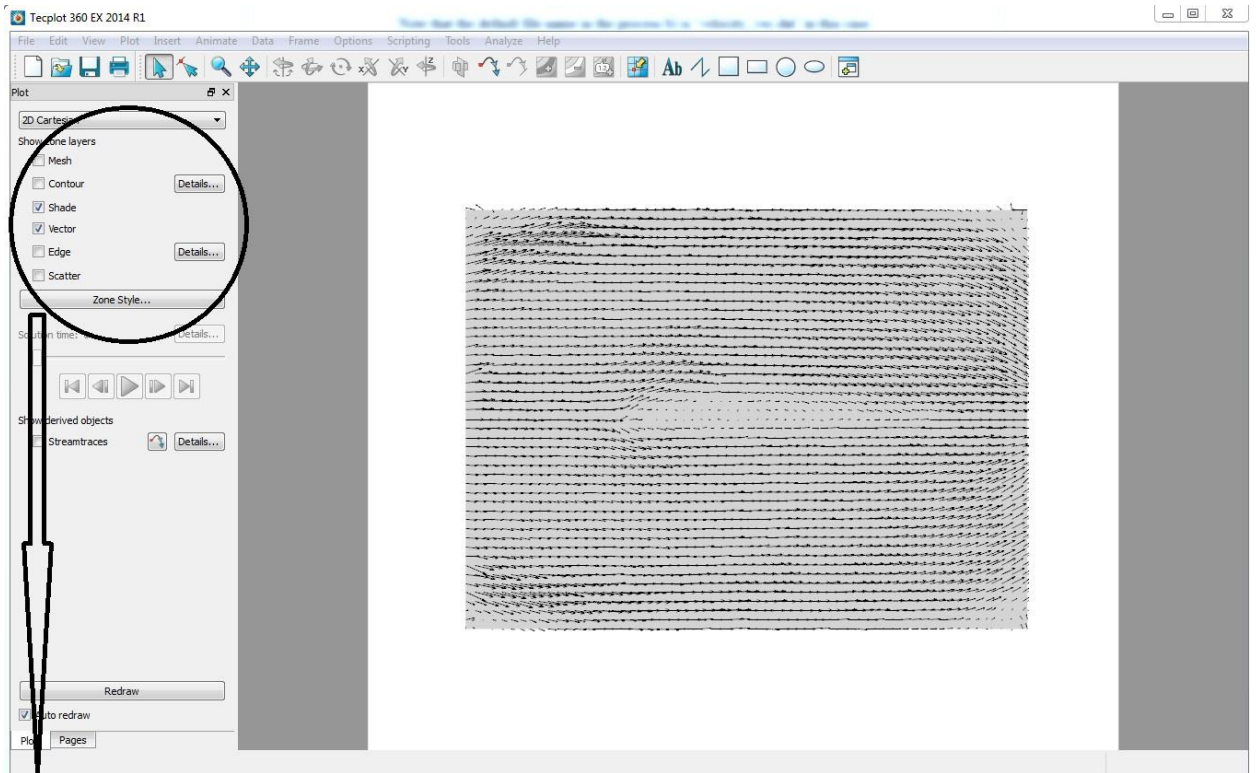a) Type in '1' if your data file name is 'velocity_vec.dat' or type in '2' for different file names.

b) Select the angle of attack according to the velocity vector file you are using.
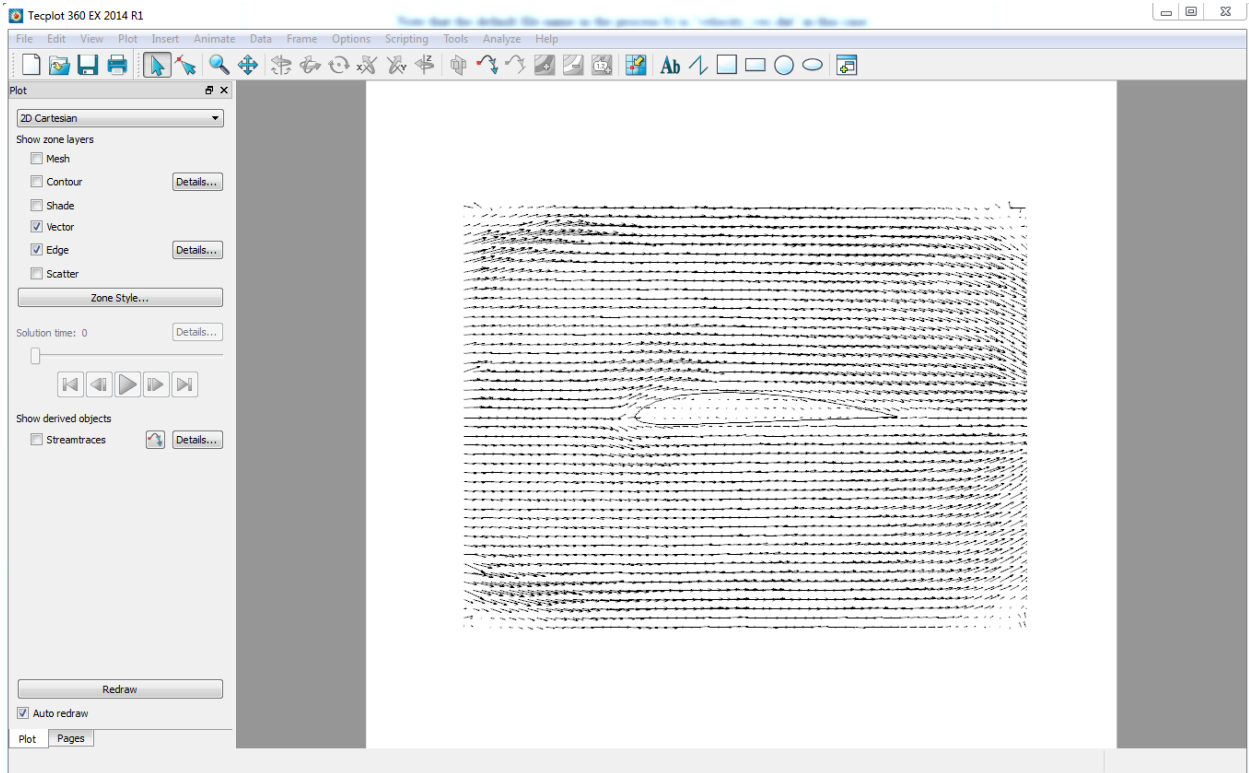
Note that the default file name in the process b) is 'velocity_vec.dat' in this case.
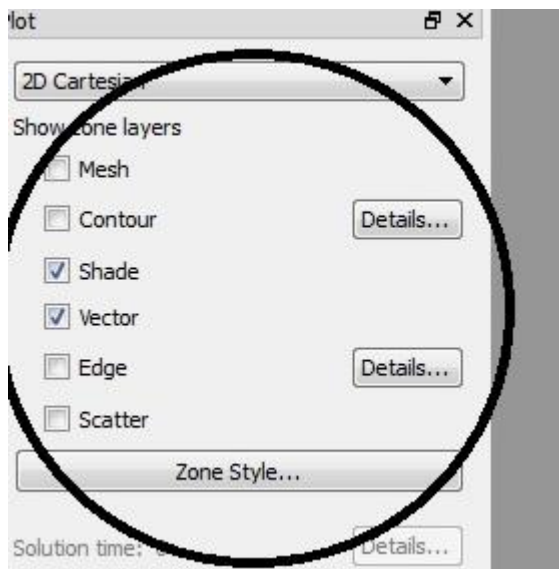
Typical example of output

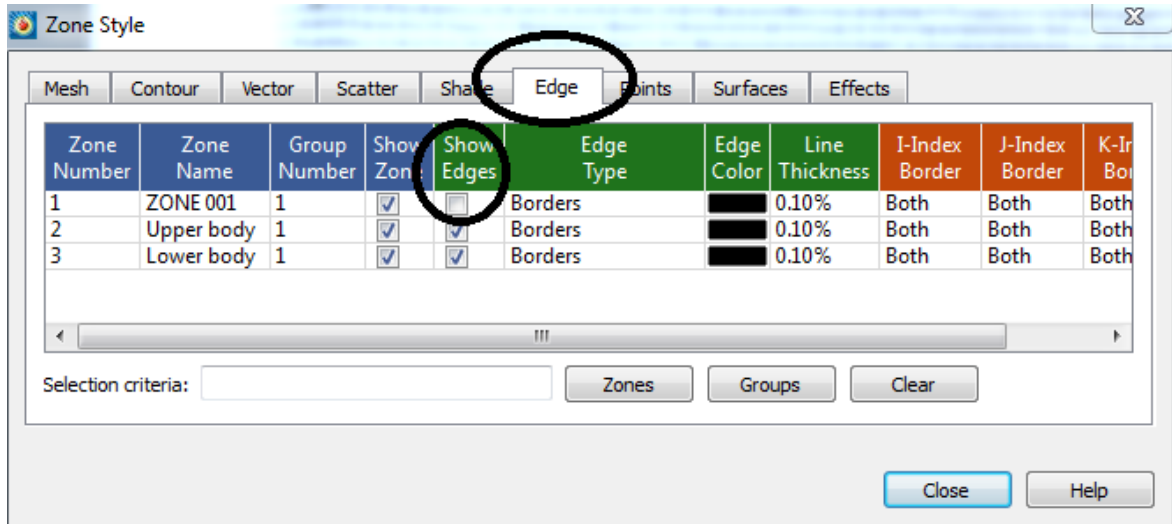Uncheck the shade box and check the edge box to display the airfoil.

Export the figure file and save the layout file. See sections 3 and 4, respectively. Do not close the Tecplot window and continue to next section for streamlines plot.

2.2 STREAMLINE PLOT

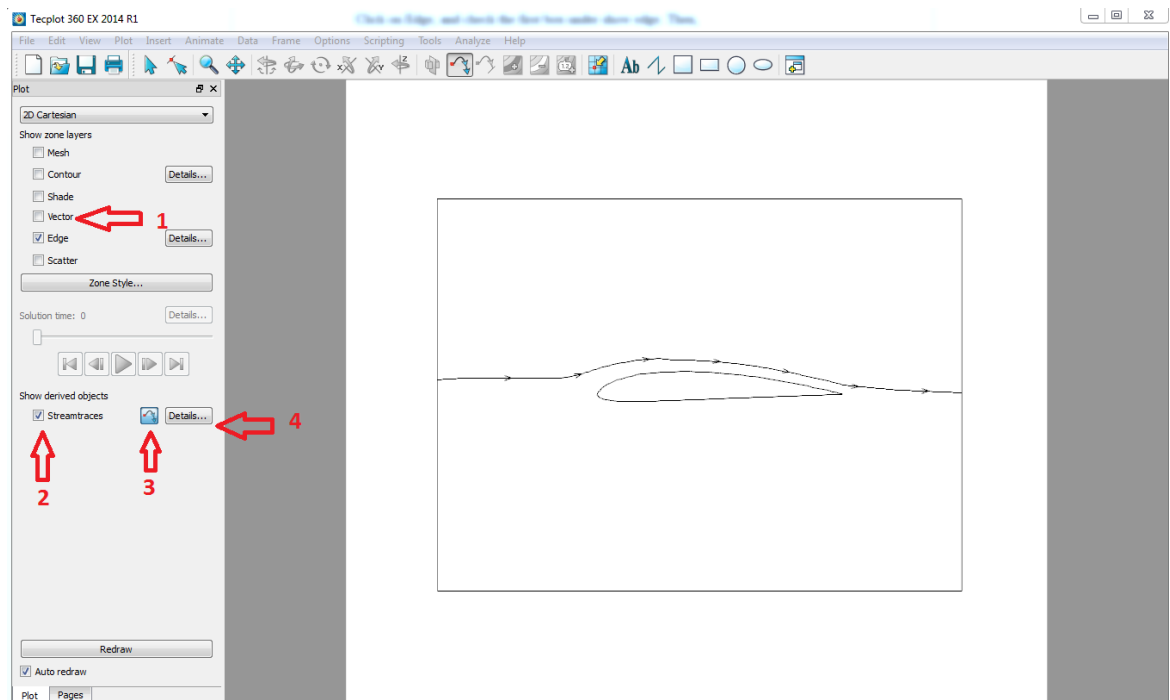To generate the streamlines figure, click on the zone style

Click on Edge, and check the first box under show edge. Then,

1) Turn off the 'Vector' check box

2) Turn on the 'Streamtraces' check box

3) Click the button to add a single or rake of streamlines
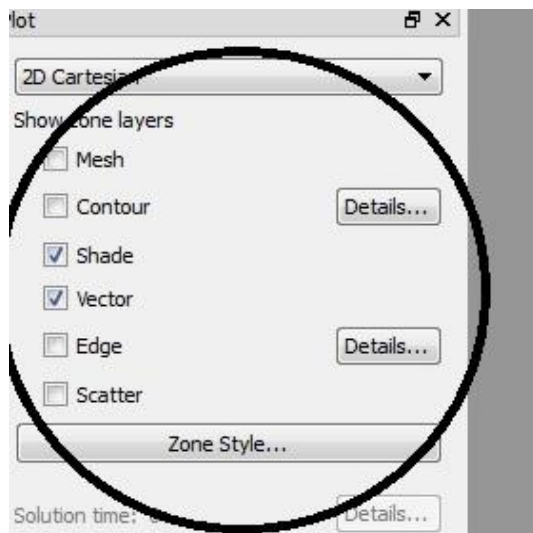
4) Click the button to edit streamlines if necessary

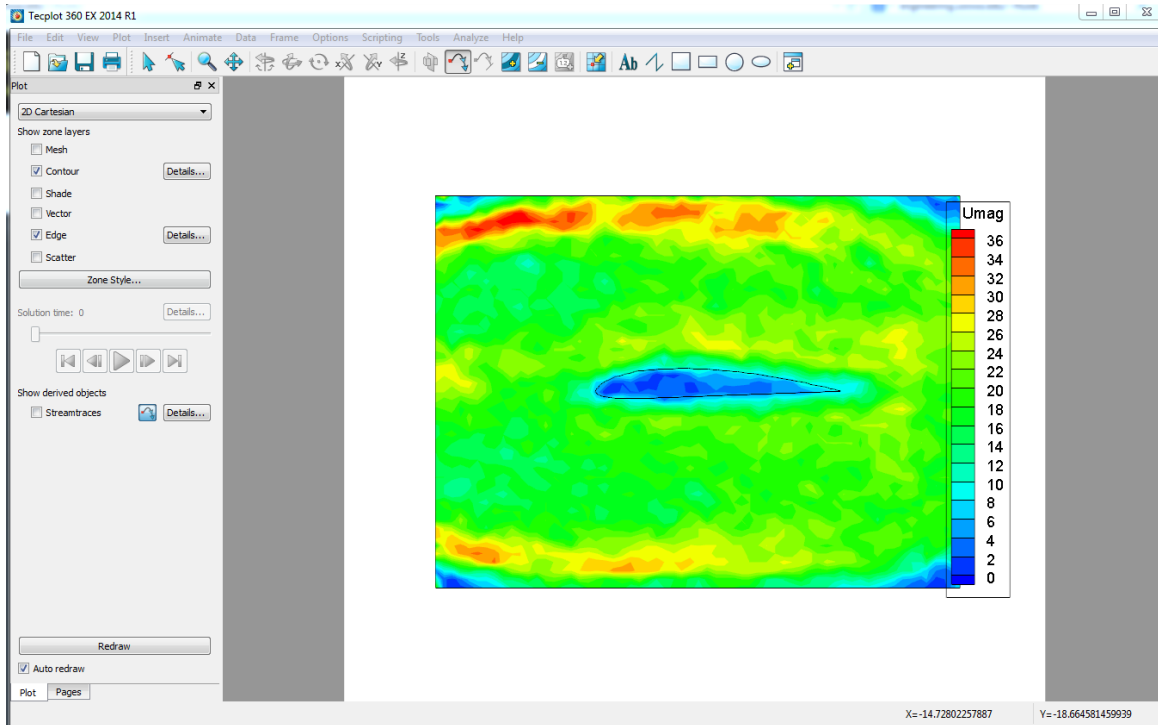Export the figure file and save the layout file. See sections 3 and 4, respectively.

Typical example of streamline figure:
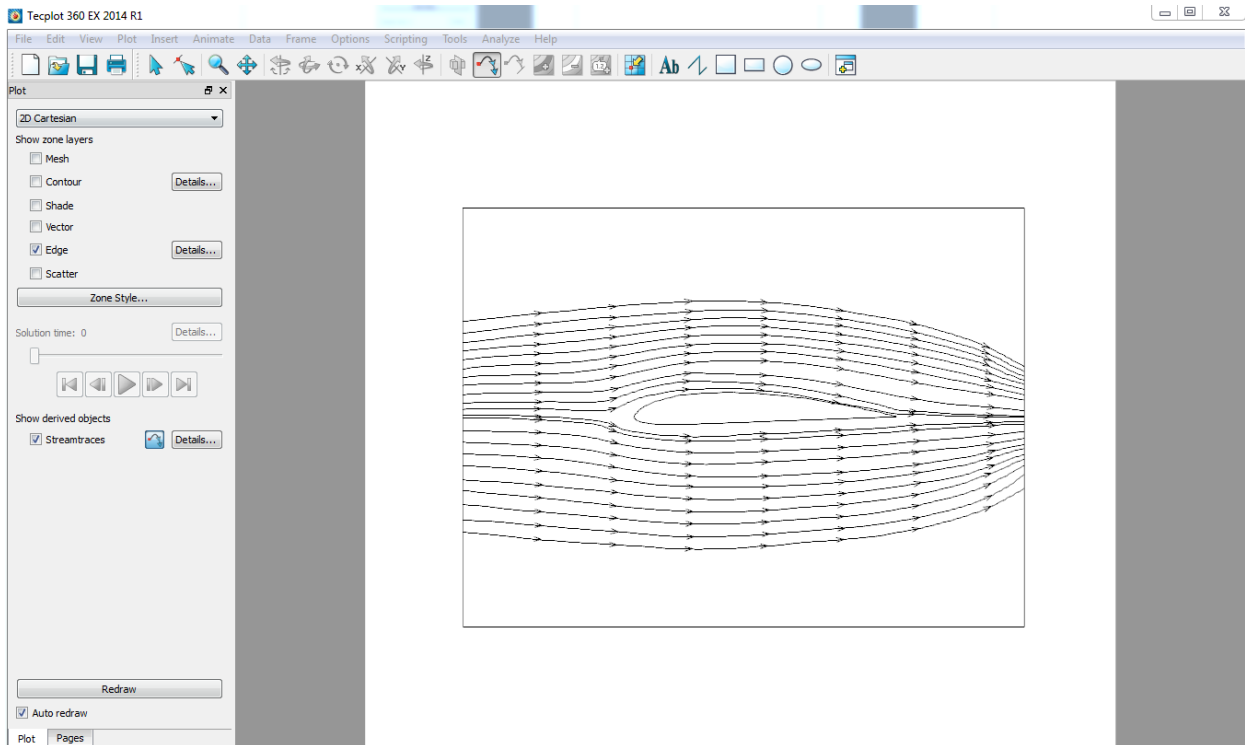
2.3 VELOCITY MAGNITUDE CONTOUR PLOT
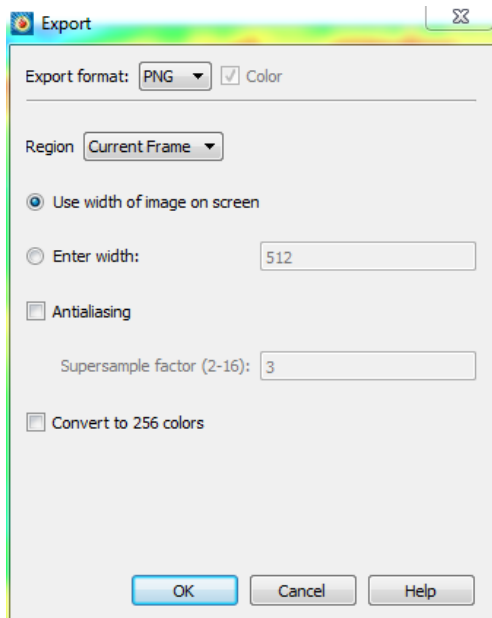
1) Turn off the 'Vector' and/or 'Streamtraces' check boxes
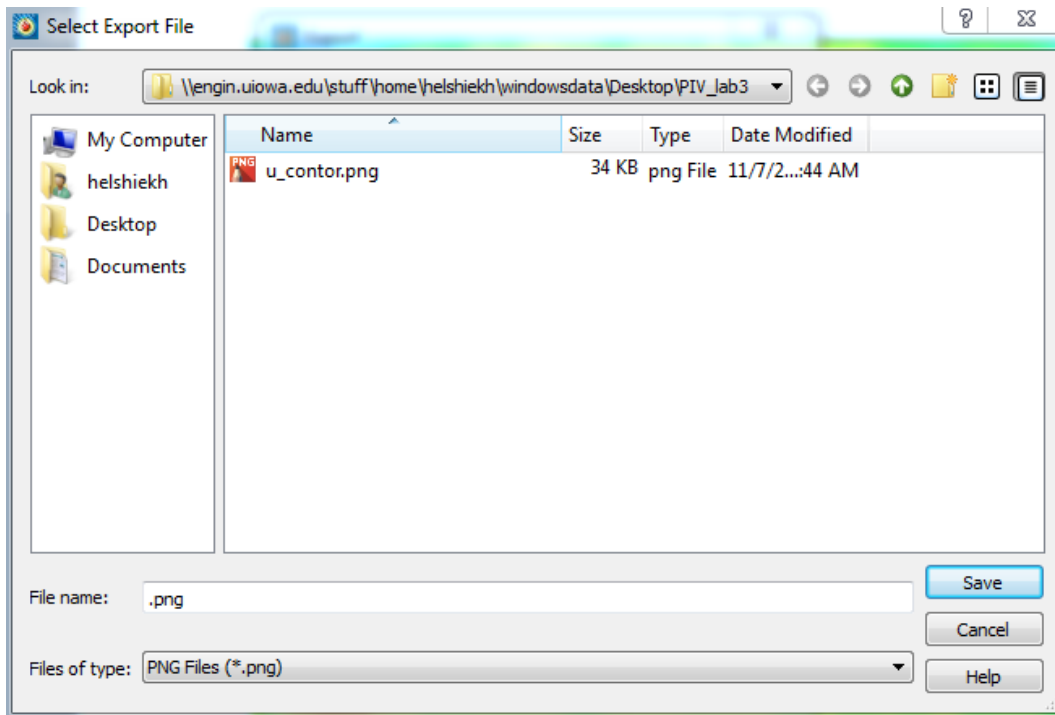
2) Turn on the 'Contour' check box

3. EXPORTING FIGURE FILES

Open image export window from the top menu, File\Export\ , then click OK.

Choose the working folder and type representative name in figure file name area (ex:

'velocity _contour_0deg.png')

4. SAVING TECPLOT LAYOUT FILES

Open Tecplot layout file save window from the top menu under 'File\Save Layout\' or 'File\Save Layout as…' and type in layout file name (ex: 'streamline_16deg.lay')