EAE 127 – XFOIL Walkthrough
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Running XFOIL

General Commanads

List current menu of available commands:
'?'
Go up one menu level:
'enter'

Load Airfoil Coordinates

In top menu:
'load' → 'enter airfoil filename or points file name

NACA Airfoils

In top menu:
'NACA' → 'enter 4 or 5 digit airfoil number'
Save any airfoil coordinates:
'save' → 'enter save file name'

Simulation

In top menu:
For inviscid:
'oper'
For viscous:
'oper' → 'visc' → 'enter Reynolds number'
Run a single angle of attack (after 'oper' commands):
'alfa' → 'enter angle of attack value'
Run a sequence of angle of attack values (after 'oper' commands):
'aseq' → 'α_{min}' → 'α_{max}' →'α increment'
NOTE: If solution will not converge for a value of α, rerun the simulation for that value until it converges.

Save Polar

Accumulate polar data in save file:
'pacc' → 'enter polar save file name' → 'enter dumpfile name' → run desired α values
After running this command, results for every alfa run will be saved to a file.
Turn off by typing 'pacc' again.

Save Surface Pressure Distribution

After running a given alfa, save surface pressure distribution with;
'cpwr'

Installation
Download from website:
http://web.mit.edu/drela/Public/web/xfoil/

For Windows:
Zip file contains xfoil.exe. Double-clicking this will open xfoil in its own window.

For Mac:
Download for Mac package and follow instructions in link next to the download. In general, double-click the downloaded .dmg, then drag the xfoil app to Applications. Click on xfoil in Applications to run