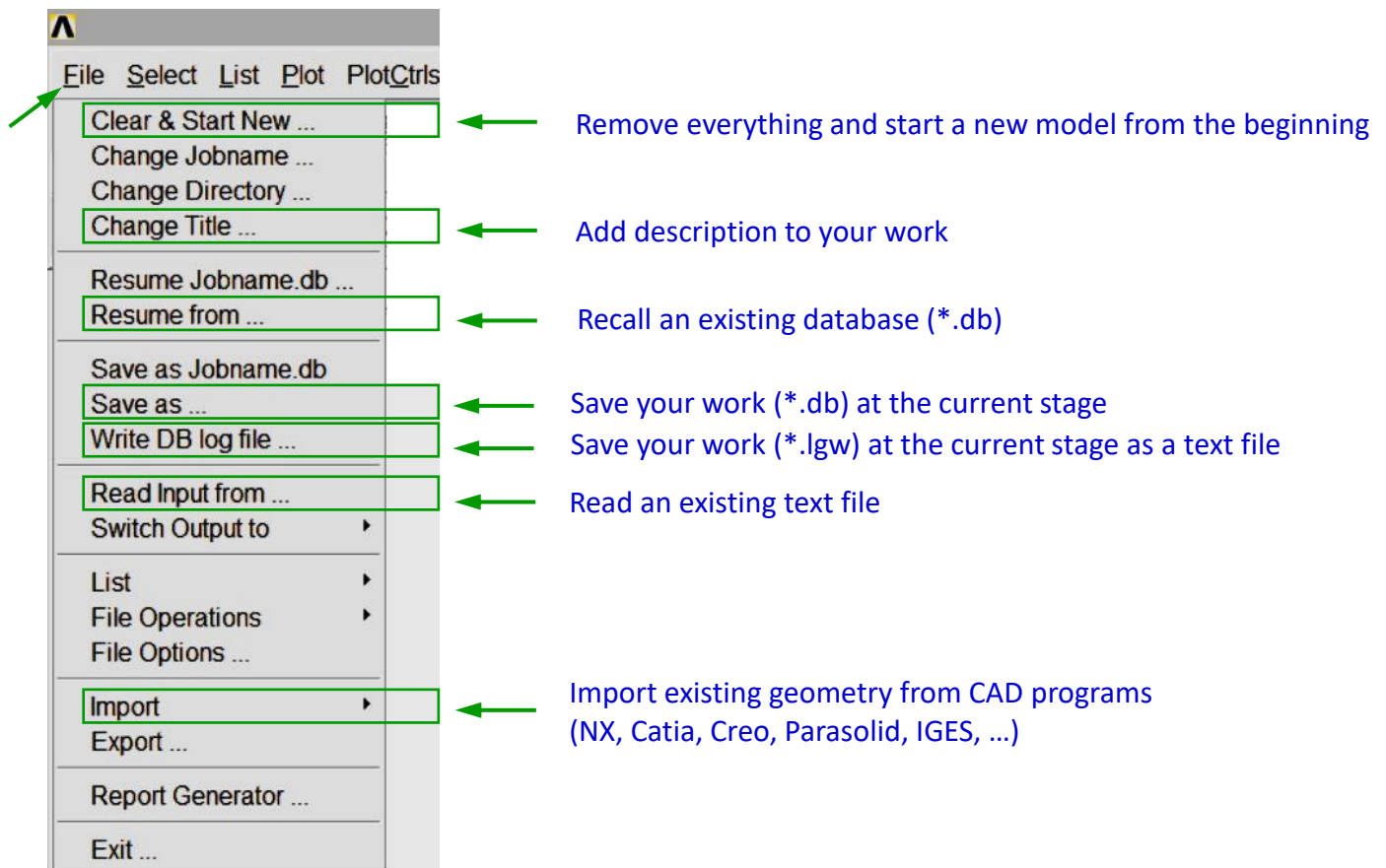


File



Comments

Databases in the ANSYS Mechanical APDL have an extension „db”.

The results files have extensions „rst” or „rth”, an error log – „err”, and a history file – „txt”.

Command UNDO is not available, so create many databases instead and give them proper names, for example for a FE analysis of an aircraft:

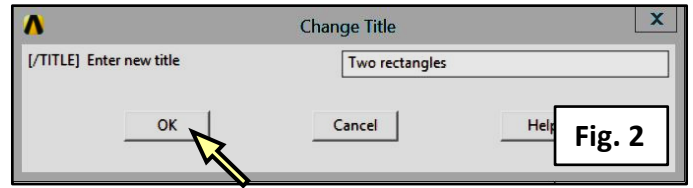
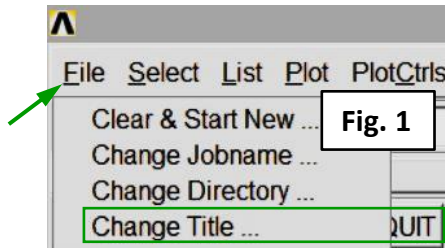
Geometry was prepared > Utility Menu> File> Save As> aircraft_geometry.db

Model was discretized > ... > aircraft_mesh.db

FE analysis was done > ... > aircraft_results.db (the database will contain some results beside saved automatically in a „rst” file)

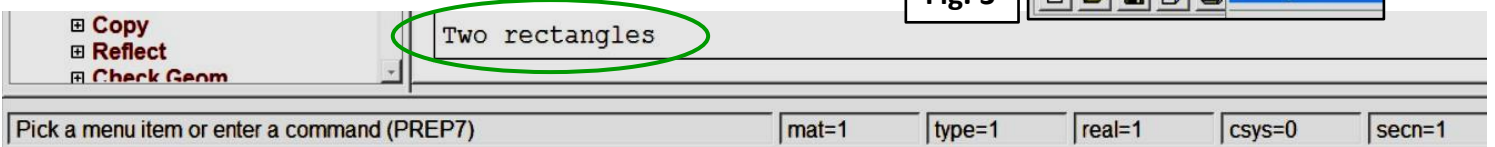
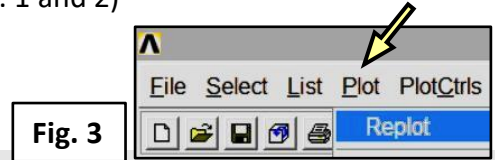
Text files (*.lgw or *.txt) are written in the Ansys Parametric Design Language (APDL) and often used by advanced users.

Add a title



Utility Menu > File > Change Title > Two rectangles → OK (Fig. 1 and 2)

Utility Menu > File > Plot > Replot (Fig. 3)



Create two rectangles (Fig. 6)

Modeling > Create > Areas > Rectangle > By Dimensions >

X1, X2 → 0, 10

Y1, Y2 → 0, 40 → Apply (Fig. 4)

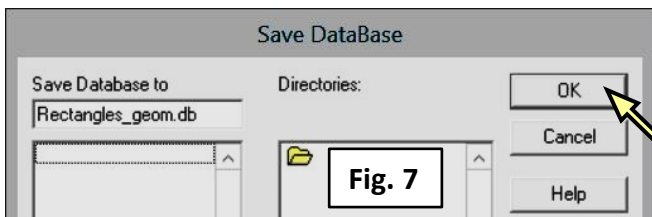
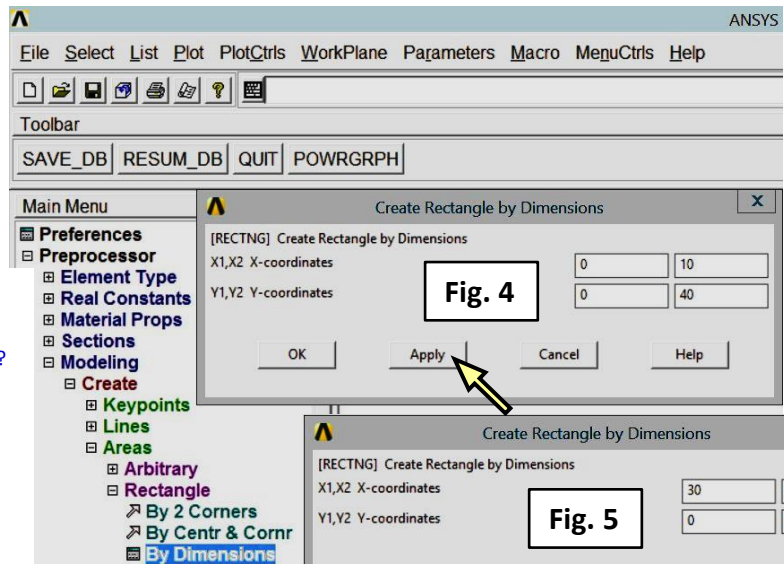
X1, X2 → 30, 50

Y1, Y2 → 0, 40 → OK (Fig. 5)

What is the difference between Apply and OK?

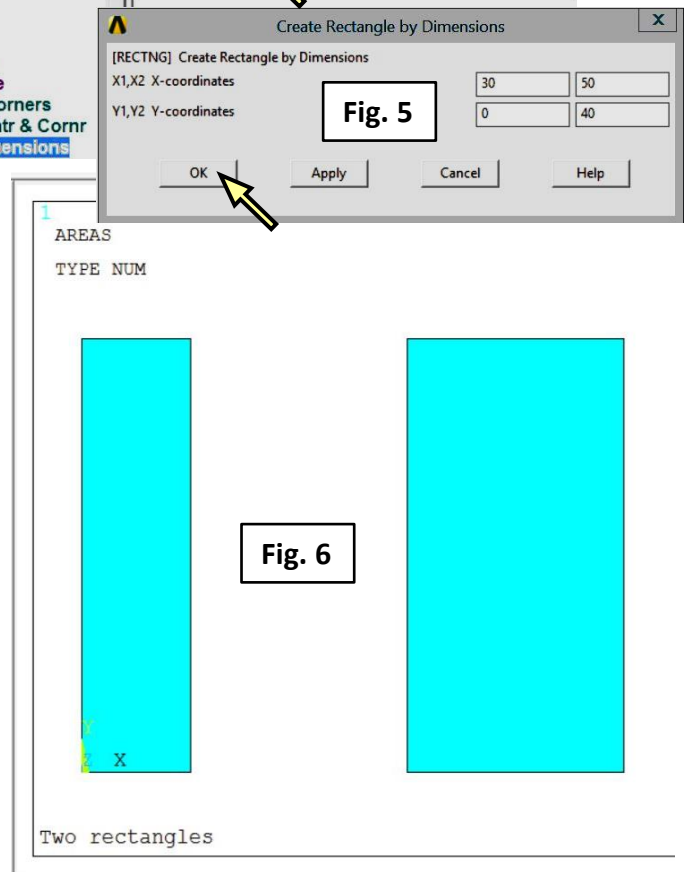
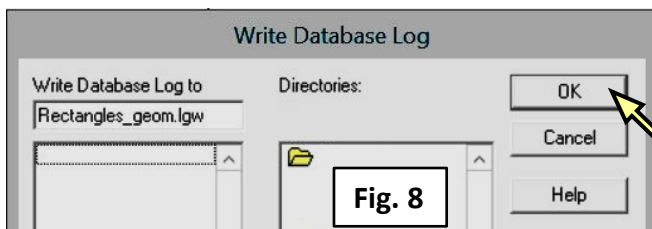
Save the database

Utility Menu > File > Save As ... > Rectangles_geom.db → OK (Fig. 7)



Save a text file

Utility Menu > File > Write DB log file ... > Rectangles_geom.lgw → OK (Fig. 8)



Finish

Utility Menu > File > Clear & Start New > Do not Read File > OK > CLEAR ... EXECUTED? > Yes

Resume an existing database

Utility Menu > File > Resume From... > Rectangles_geom.db > OK

When the database is resumed you may continue working on it.

Finish

Utility Menu > File > Clear & Start New > Do not Read File > OK > CLEAR ... EXECUTED? > Yes

Edit a text file

Use a text editor (*Notepad* or *Wordpad*) and modify the text of „Rectangles_geom.lgw” to a form:

```
/TITLE,Two rectangles
! /REPLOT
/PREP7
RECTNG,0,10,0,40,
RECTNG,30,50,0,40,
! SAVE, Rectangles_geom,db,
! LGWRITE,'Rectangles_geom','lgw',' ',COMMENT
APLOT
```

Lines with exclamation „!” are treated as comments (and may be removed).

Command APLOT was added to plot the rectangles in the graphics window.

Save the file as: Rectangles_geom_1.lgw

Reading a text file

Utility Menu > File > Read Input from... > Rectangles_geom_1.lgw > OK

Comments

Reading a text file (*.lgw) may be used instead of resuming a database (*.db). The text file requires smaller work space and allows to change the geometry using a text editor.

Easy way to learn the ADPL language is to use the command „Write DB log file...” and working on saved text files.