PART LIST REGENERATE PROGRAM FOR INVENTOR 10

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Abstract:

In the detail design of machines, you define the materials to use and the gross dimensions. In inventor, everybody do this manually on the description field or in the part list directly; and you commit some mistakes in bigger assemblies. Correct these part lists in every drawing take so much time. I show below a program that uses any of VB and parameters to regenerate the part list and assemblies, quickly. ¡Enjoy it!

Resume:

This program regenerates the parts in an assembly that have defined the gross dimensions in one, two or three dimensions with parameters. It takes the stock number and the parameters that contain values different to "0" from each one, mix it and put on the description property. If you have defined correctly the parameters; the part list of this assembly can be regenerate.
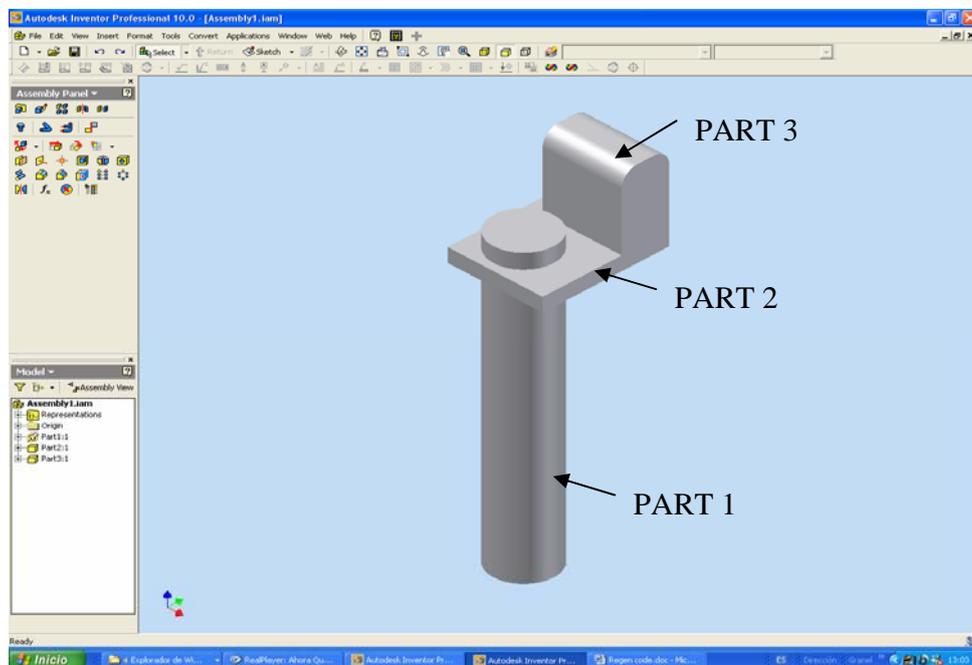

Picture 1, Assembly for this example

The three parameters was named "dimension_1", "dimension_2", "dimension_3" in lower case letter ever. If the gross length is only represent with only one dimension such as angles, wires, rods and the other parameters has to be in "0 in" or "0 mm". In the case of the plates will be represent with two parameters and the volumes will be represent with three parameters.
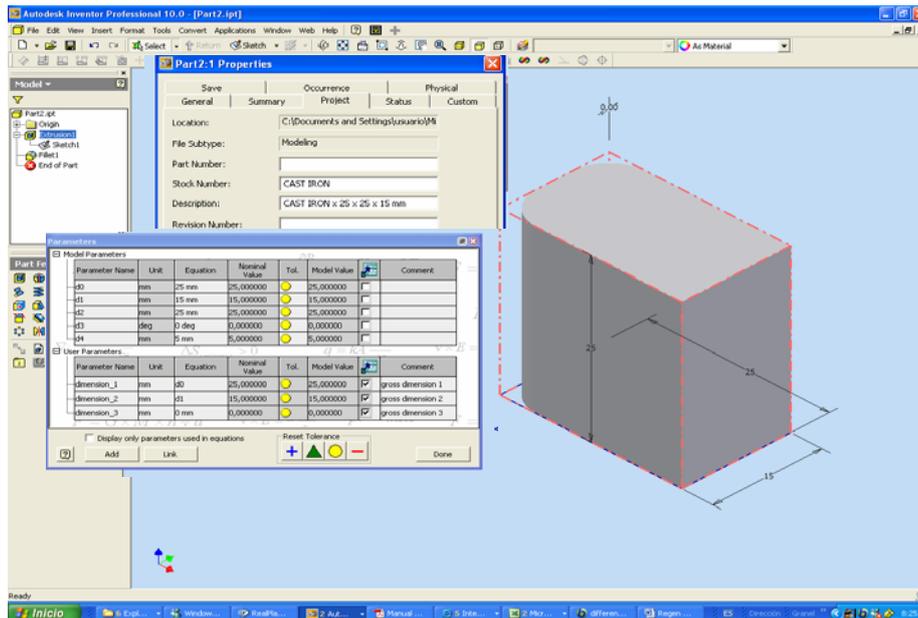
In the picture 1, see an assembly that has three different parts and these are a plate, a rod and a volume. In the picture 2 we have the properties and the parameters for each one.
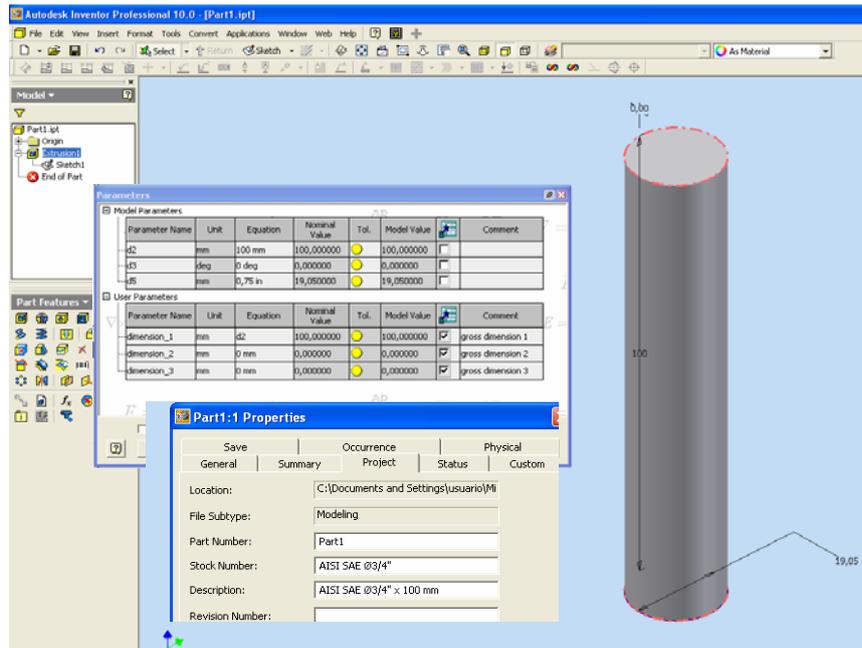
**Picture 2a, Part 1dimensions and parameters**
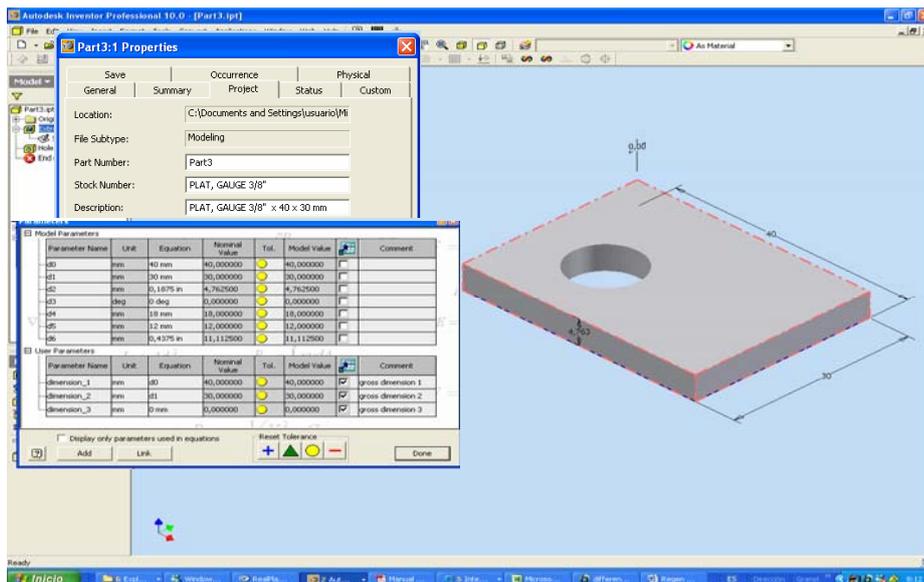
Picture 2b, part 2 dimensions and parameters

Picture 2c, Part 3 dimensions and parameters

Now, we will change the dimensions in the three cases with different values for each dimension. In the picture 3 shows the assembly drawing before you change the parameters. We will change the dimensions that are mark into the ellipses in the picture 3a
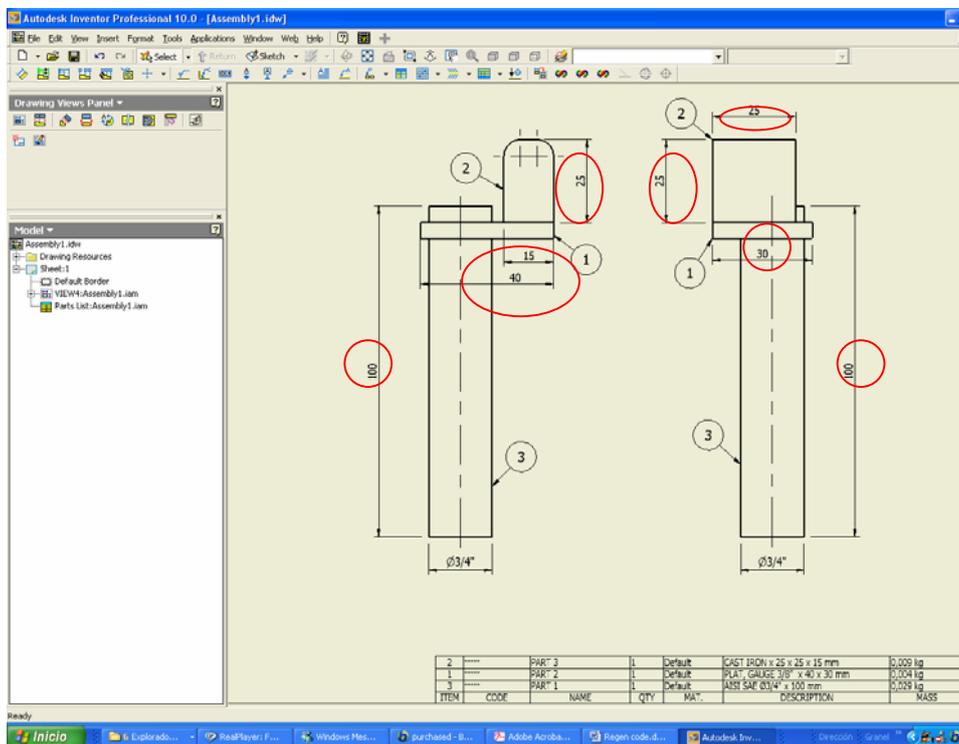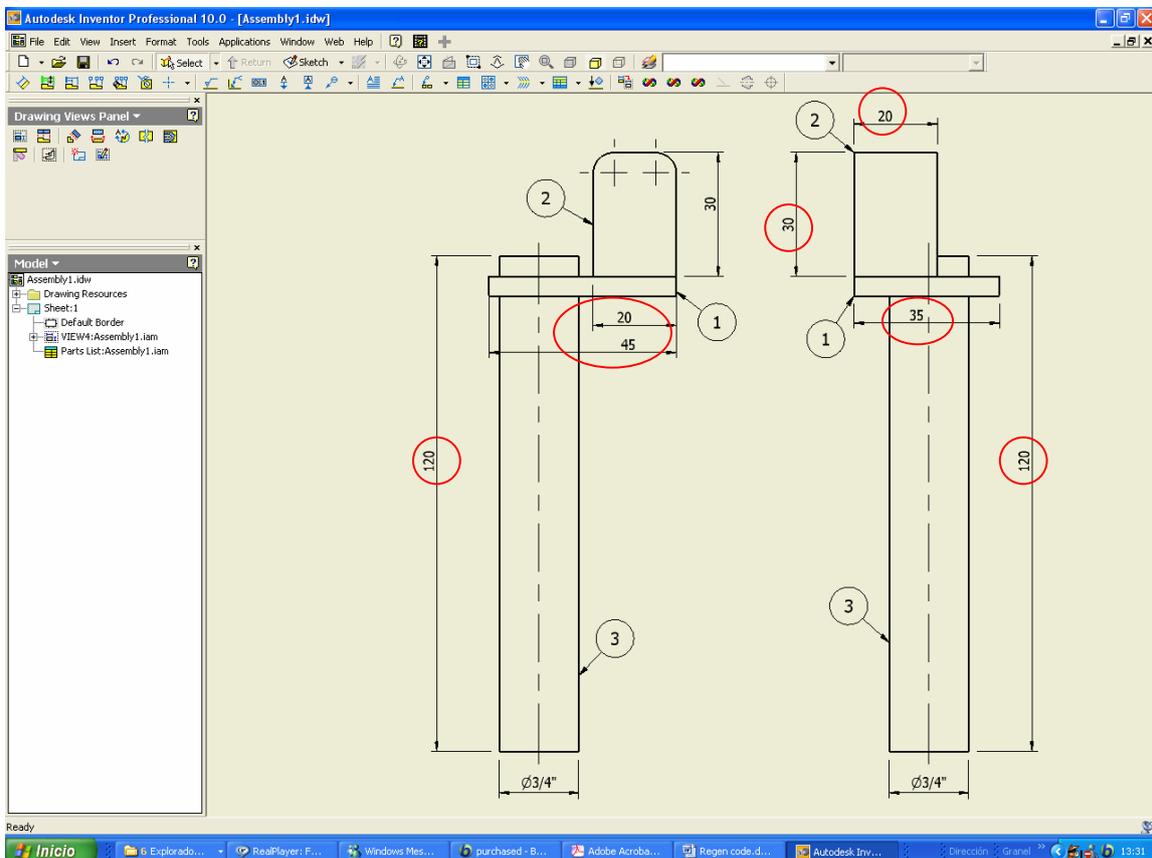

Picture 3a, Drawing of Assembly

ITEM	CODE	NAME	QTY	MAT.	DESCRIPTION	MASS
2	-----	PART 3	1	Default	CAST IRON x 25 x 25 x 15 mm	0,009 kg
1	-----	PART 2	1	Default	PLAT, GAUGE 3/8" x 40 x 30 mm	0,004 kg
3	-----	PART 1	1	Default	AISI SAE Ø3/4" x 100 mm	0,029 kg

Picture 3b, Part list of the Assembly

Now, running the program on the assembly window and you can see the drawing again and it's ready, the drawing was updated (see picture 4). The part list shows the description field and put the values in the list in this case.

Picture 4a, Regenerate Dimensions

ITEM	CODE	NAME	QTY	MAT.	DESCRIPTION	MASS
2	-----	PART 3	1	Default	CAST IRON x 30 x 20 x 20 mm	0,012 kg
1	-----	PART 2	1	Default	PLAT, GAUGE 3/8" x 45 x 35 mm	0,006 kg
3	-----	PART 1	1	Default	AISI SAE Ø3/4" x 120 mm	0,034 kg

Picture 4b, Part list updated

The program round the values to zero decimals in the "mm" dimensions and two decimals in "inch" dimensions. The description field beginning with the stock number then the inches dimensions and finish with "mm" dimensions. The dimensions are order from bigger to smaller. Watch some examples of the program result below

Example 1:

    -Stock number= Cast Steel
    -dimension_1=100 mm
    -dimension_2=200 mm
    -dimension_3=300 mm
    Description: Cast Steel x 300 x 200 x 100 mm

Example 2:

    -Stock number= HR plate 3/8"
    -dimension_1=0 in
    -dimension_2=3"
    -dimension_3=100mm
    Description: HR plate 3/8"x 3" x 100 mm

Example 3:

    -Stock number= Cast Steel
    -dimension_1=0 in
    -dimension_2=0 mm
    -dimension_3=0 in
    Description: Cast Steel

Example 4:

    -Stock number= Bar Ø1"
    -dimension_1=0 in
    -dimension_2=200 mm
    -dimension_3=0 mm
    Description: Bar Ø1" x 200mm

Example 5:

    -Stock number= HR plate 3/8"
    -dimension_1=0 in
    -dimension_2=3"
    -dimension_3=4"
    Description: HR plate 3/8"x 4" x 3"