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/*-----*
* File Name: AddEditTextLabelInGraph.c *
* Creation: ER, 03/17/05 *
* Purpose: Programming Example *
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* *
* Modification Log: *
*-----*/

#include <Origin.h>

////////////////////////////////////
// This example shows how to create a Double Y graph using the corresponding
// template in Origin.
//
// Note:
// 1. It is assumed that a worksheet with three columns X, Y, Y is active
// 2. Before compile this file, need run "run.LoadOC(Originlab\graph utils.c, 16)"
// to build it into current workspace, else will get linking error.
//

#include <..\Originlab\graph_utils.h> // needed for page_add_layer function

void create doubley graph()
{
    // Declare worksheet and check validity
    Worksheet wks = Project.ActiveLayer();
    if( !wks )
    {
        out_str("Active layer is not a worksheet!");
        return;
    }

    // Declare two curves using cols 1-2 and cols 1-3 for the two Ys
    Curve crv1(wks, 0, 1);
    Curve crv2(wks, 0, 2);

    // If either curve is not a valid object, print error and return
    if(!crv1 || !crv2)
    {
        printf("Invalid curve object(s)!\n");
        return;
    }

    // Create new graph page using the DoubleY template
    GraphPage gpg;
    gpg.Create("DOUBLEY");

    // Declare graph layers 1 and 2
    GraphLayer gly1 = gpg.Layers(0);
    GraphLayer gly2 = gpg.Layers(1);

    // Add curve 1 to layer 1 and curve 2 to layer 2, and rescale both
    gly1.AddPlot(crv1);
    gly1.Rescale();
    gly2.AddPlot(crv2);
    gly2.Rescale();
}

////////////////////////////////////
// This example shows how to create a Double(or more) Y graph not using the template.
//
// Note: It is assumed that a worksheet with at least three columns X, Y, Y(or more Y)
// is active.
//

void create multiy graph()
{
    // Construct data range from active worksheet
    Worksheet wks = Project.ActiveLayer();

    DataRange dr;
    dr.Add(wks, 0, "X"); // 1st column as X data
    dr.Add(wks, 1, "Y", -1); // Others column as Y data

    // Get the number of Y
    DWORD dwRules = DRR_GET_DEPENDENT | DRR_NO_FACTORS;
    int nNumYs = dr.GetNumData(dwRules);

    // Add more layers with right Axis and link to the 1st layer
    GraphPage gp;
    gp.Create("Origin");
}

```

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while ( gp.Layers.Count() < nNumYs )
{
    page_add_layer(gp, false, false, false, true,
        ADD_LAYER_INIT_SIZE_POS_MOVE_OFFSET, false, 0, LINK STRAIGHT);
}

// Loop and add plot from each XY data range to graph layer
foreach(GraphLayer gl in gp.Layers)
{
    int nLayerIndex = gl.GetIndex();

    // Get the sub XY range from dr
    DataRange drOne;
    dr.GetSubRange(drOne, dwRules, nLayerIndex);

    // Plot one XY range to one graph layer
    int nPlot = gl.AddPlot(drOne, IDM_PLOT_LINE);
    if( nPlot >= 0 )
    {
        DataPlot dp = gl.DataPlots(nPlot);
        dp.SetColor(nLayerIndex); // Set make data plot as different color

        // Set the ticks and ticklabels of right Y axis auto color
        gl.YAxis.AxisObjects(AXISOBJPOS_AXIS_SECOND).RightTicks.Color.nVal =
        gl.YAxis.AxisObjects(AXISOBJPOS_LABEL_SECOND).RightLabels.Color.nVal =
        INDEX_COLOR AUTOMATIC;

        gl.Rescale();
    }
}
}
}

////////////////////////////////////

```