

Programming Assignment No.2

Due Date: April 10, 2018

- Q1.** Draw more than 4 different-shaped figures and your name on your window. Note that each figure should be filled with its own color.

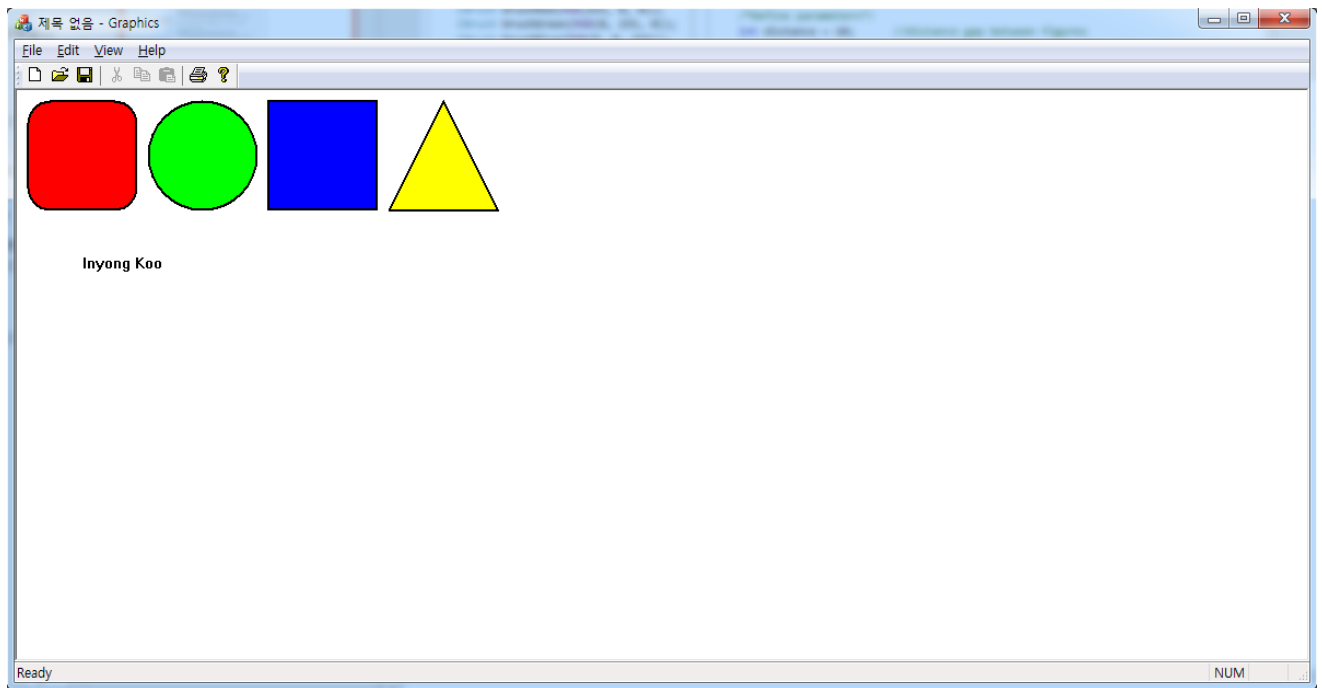


Figure 1 Result of my 'Graphics' project.

Since this is a very simple job, (drawing each figure takes within 10 lines in C++ code.) I did not define any functions for my result.

I made a MFC project "Graphics", and only modified on the `OnDraw()` function in `CGraphicsView` class. I defined `penBlack` and `brush[Red|Green|Blue|Yellow]` parameters to set different colors for each figures. I also defined parameters such as `distance`, `posX`, `posY` to set the position of each figures, and `size` to set the size of each figure.

I used CDC class method functions such as `RoundRect`, `Ellipse`, `Rectangle`, `Polygon` and `TextOut`. You can find the descriptions on the link:

<https://msdn.microsoft.com/ko-kr/library/fxhhde73.aspx>

Detailed explanation for each parameters is written in comment, as you will see from the code of `OnDraw()` on the next page.

```

void CGraphicsView::OnDraw(CDC* pDC)
{
    /*Define pen and brushes*/
    CPen penBlack(PS_SOLID, 2, RGB(0, 0, 0));
    CBrush brushRed(RGB(255, 0, 0));
    CBrush brushGreen(RGB(0, 255, 0));
    CBrush brushBlue(RGB(0, 0, 255));
    CBrush brushYellow(RGB(255, 255, 0));

    CPen* pOldPen = pDC->SelectObject(&penBlack);
    CBrush* pOldBrush;

    /*Define parameters*/
    int distance = 10;    //distance gap between figures
    int posX = distance;  //Set x value of left upper point of bounding rectangle
    int posY = distance;  //Set y value of left upper point of bounding rectangle
    int size = 100;

    /*Draw round rectangle*/
    pOldBrush = pDC->SelectObject(&brushRed);
    pDC->RoundRect(posX, posY, posX + size, posY + size, 40, 40);

    posX = posX + size + distance; //set next posX

    /*Draw Ellipse*/
    pOldBrush = pDC->SelectObject(&brushGreen);
    pDC->Ellipse(posX, posY, posX + size, posY + size);

    posX = posX + size + distance; //set next posX

    /*Draw Rectangle*/
    pOldBrush = pDC->SelectObject(&brushBlue);
    pDC->Rectangle(posX, posY, posX + size, posY + size);

    posX = posX + size + distance; //set next posX

    /*Draw Triangle (polygon)*/
    CPoint pts[3];
    pts[0].x = posX + size / 2;
    pts[0].y = posY;

    pts[1].x = posX;
    pts[1].y = posY + size;

    pts[2].x = posX + size;
    pts[2].y = posY + size;

    pOldBrush = pDC->SelectObject(&brushYellow);
    pDC->Polygon(pts, 3);

    /*Set text*/
    pDC->TextOut(60, 150, TEXT("Inyong Koo"));
}

```

Figure 2 C++ code of OnDraw()

As in Assignment 1, I deleted followings in the project file: *.pch, *.pdb, "ipch" folder, "debug folder".