

# Custom diagram painters

The Open API provides a way to add your own custom diagram painters for painting some additional stuff on the diagram canvas. A good sample would be some highlighting in the diagram.



The painter can be added only into the opened diagram's [com.nomagic.magicdraw.uml.symbols.DiagramSurface](https://www.nomagic.com/magicdraw.uml/symbols.DiagramSurface). Only the opened diagram has [DiagramSurface](#). A closed diagram returns *null*.

## Example of the code:

```
Application.getInstance().addProjectEventListener(new
ProjectEventListenerAdapter()
{
    public void projectOpened(Project project)
    {
        project.addPropertyChangeListener(new PropertyChangeListener()
        {
            public void propertyChange(PropertyChangeEvent evt)
            {
                if(evt.getPropertyName().equals(Project.DIAGRAM_OPENED))
                {
                    DiagramPresentationElement diagram = Application.
getInstance().getProject().getActiveDiagram();
                    diagram.getDiagramSurface().addPainter(new
DiagramSurfacePainter()
                    {
                        public void paint(Graphics g, DiagramPresentationElement
diagram)
                        {
                            g.setColor(Color.BLUE);
                            List symbols = diagram.getPresentationElements();
                            for (int i = 0; i < symbols.size(); i++)
                            {
                                PresentationElement o = (PresentationElement)
symbols.get(i);
                                if( o instanceof ShapeElement)
                                {
                                    Rectangle bounds = o.getBounds();
                                    bounds.grow(5,5);
                                    ((Graphics2D)g).draw(bounds);
                                }
                            }
                        }
                    });
                }
            }
        });
    }
});
```



You can find the code examples in `<installation_directory>\openapi\examples\customdiagram painter`