

Hello,

I'm Adam from the Apyrse Support team, glad to help!

RE:

1. **Is there a way to adjust the opacity, size and text colour of the watermark so that it doesn't interfere with existing content?**

Yes, for example in the "watermarkCanvas" method you can set more parameters to produce an opacity, and set both size and text colour for the watermark, ex:

I've declared some variables beforehand such as "fontSize", "font" and a "Paragraph" object named "paragraph" to inherit these parameters. Further, we are able to set a font colour using the "SetFontColor" method as shown below:

```
float fontSize = 30;
var rotation = 45;
PdfFont font =
PdfFontFactory.CreateFont(StandardFonts.HELVETICA);
dynamic paragraph = new Paragraph("Owned By: John Doe")
    .SetFont(font)
    .SetFontSize(fontSize)
    .SetFontColor(ColorConstants.RED);
```

Since these values are pre defined we can then use them during the construction of a new canvas:

```
Canvas watermarkCanvas = new Canvas(under,
pdfDoc.GetDefaultPageSize())
    .ShowTextAligned(paragraph,
        xPage, yPage, 1,
        TextAlignment.CENTER,
        VerticalAlignment.TOP,
        rotation
    );
```

Applying Opacity requires that we use the `iText.Kernel.Pdf.Extgstate` name space and set a graphical state with opacity as one of the parameters:

```
PdfExtGState gsl = new PdfExtGState().setFillOpacity(0.5f);
```

We should take care to save the graphic state of the canvas first so we can revert to a default state without our transparency changes after writing the watermark, that way we do not accidentally pollute any other canvas actions later on, ex:

```

var rotation = 45;
float opacity = 0.5f;
PdfFont font =
PdfFontFactory.CreateFont(StandardFonts.HELVETICA);
dynamic paragraph = new Paragraph("Owned By: John Doe")
    .SetFont(font)
    .SetFontSize(fontSize)
    .SetFontColor(ColorConstants.RED);

PdfExtGState transparencyState = new
PdfExtGState().SetFillOpacity(opacity);
// Save existing state without graphical changes so we can revert
to it later
under.SaveState();
// Set transparency using PdfExtGState
under.SetExtGState(transparencyState);
// We write our watermarkCanvas before the original contents of
the input.pdf
Canvas watermarkCanvas = new Canvas(under, pageSize)
    .ShowTextAligned(paragraph,
        // set our exact middle to render the paragraph
        xPage, yPage, 1,
        TextAlignment.CENTER,
        VerticalAlignment.TOP,
        rotation
    );

watermarkCanvas.Close();
//restore the graphics - Prevents writing accidental Canvas items
with unwanted transparency
under.RestoreState();
}
pdfDoc.Close();}

```

Further documentation can be found regarding a transparent watermark here:

<https://kb.itextpdf.com/itext/watermark-examples>

2. **How can I rotate text along the center point to make it appear diagonal across the page at a 45° angle? I tried adding a rotation parameter, but the text is rotated too much.**

To achieve a true 45° angle across the page we should first look for the dimensions of the page.

- a. Build a PdfPage object
- b. Set float variables for length and width, dividing each X or YW values by 2 to get the exact middle point on X or Y axis, ex:

```
PdfPage page = pdfDoc.GetPage(i);
```

```
//we get the exact middle of the page from pdfDoc
var pageSize = page.GetPageSize();
//get width and divide by 2
float xPage = (pageSize.GetWidth() / 2);
//get height and divide by 2
float yPage = (pageSize.GetHeight() / 2);
```

Now, when we write the watermark Canvas we can dynamically assign x and y coordinates as xPage and Ypage, ex:

```
Canvas watermarkCanvas = new Canvas(under, pageSize)
    .ShowTextAligned(paragraph,
        // set our exact middle to render the paragraph
        xPage, yPage, 1,
        TextAlignment.CENTER,
        VerticalAlignment.TOP,
        //Rotation likely as expected now that we're getting
        the exact middle of the page
        rotation
    );
```

3. Can the watermark be placed beneath the existing content instead of over it?

Yep! You can do this by using the `newContentStreamBefore()` method in the construction of your PdfCanvas object. When you go to write the Canvas object (watermark), calling the special PdfCanvas object with this property will make it so that the watermark is drawn first, the contents from "input.pdf" on top at the end.

ex:

```
PdfCanvas under = new
PdfCanvas(pdfDoc.GetPage(i).NewContentStreamBefore(), new
PdfResources(), pdfDoc);
```

```
Canvas watermarkCanvas = new Canvas(under, pageSize)
    .ShowTextAligned(paragraph,
        // set our exact middle to render the paragraph
        xPage, yPage, 1,
        TextAlignment.CENTER,
        VerticalAlignment.TOP,
        //Rotation likely as expected now that we're getting the
        exact middle of the page
        rotation
    );
```

4. Can the watermarking be automated so it will draw the watermark whenever a new page is started or ended? Additionally, We'd like to position this watermark in the center of the page, regardless of what size the page may have.

Note that Point #2 has addressed centering the watermark to the center point of the page regardless what the size of the page is by getting the page size, getting the length and center half values and using them as draw points when drawing the canvas. Further, note that this does not handle a case you may run into where one of the PDF pages orientation is dissimilar than the other (Landscape vs Portrait) and because of this I invite you to review this code sample: <https://kb.itextpdf.com/itext/watermark-examples#Watermarkexamples-transparentwatermark2> which handles such cases of page rotation.

With regards to automating when a watermark appears on a new page, one approach is to iterate through every page in the document, writing the watermark to your specifications of position, size, color and etc mentioned in the points above, however I'm not confident that I fully understood your question regarding "when" to write the watermark; So that we can understand your use case more thoroughly with this point can you please elaborate on when you would like the watermark to write into the PDF? In the meantime, feel free to review my code sample so you draw inspiration on how to loop through each page and write the watermark:

https://github.com/AJBCreative/iText-watermark/blob/main/test_project_csharp/SampleCode.cs

Best,

Adam B