

PDF Metamorphosis .Net

(Multi-platform .Net library)

[SautinSoft](http://SautinSoft.com)

Linux development manual

Table of Contents

1. Preparing environment	2
1.1. Check the installed Fonts availability	3
2. Creating "Convert RTF/DOCX to PDF" app.....	5

1. Preparing environment

In order to build multi-platform applications using .NET on Linux, the first steps are for installing in our Linux machine the required tools.

We need to install .NET SDK from Microsoft and to allow us to develop easier, we will install an advance editor with a lot of features, Visual Studio Code from Microsoft.

Both installations are very easy and the detailed description can be found by these two links:

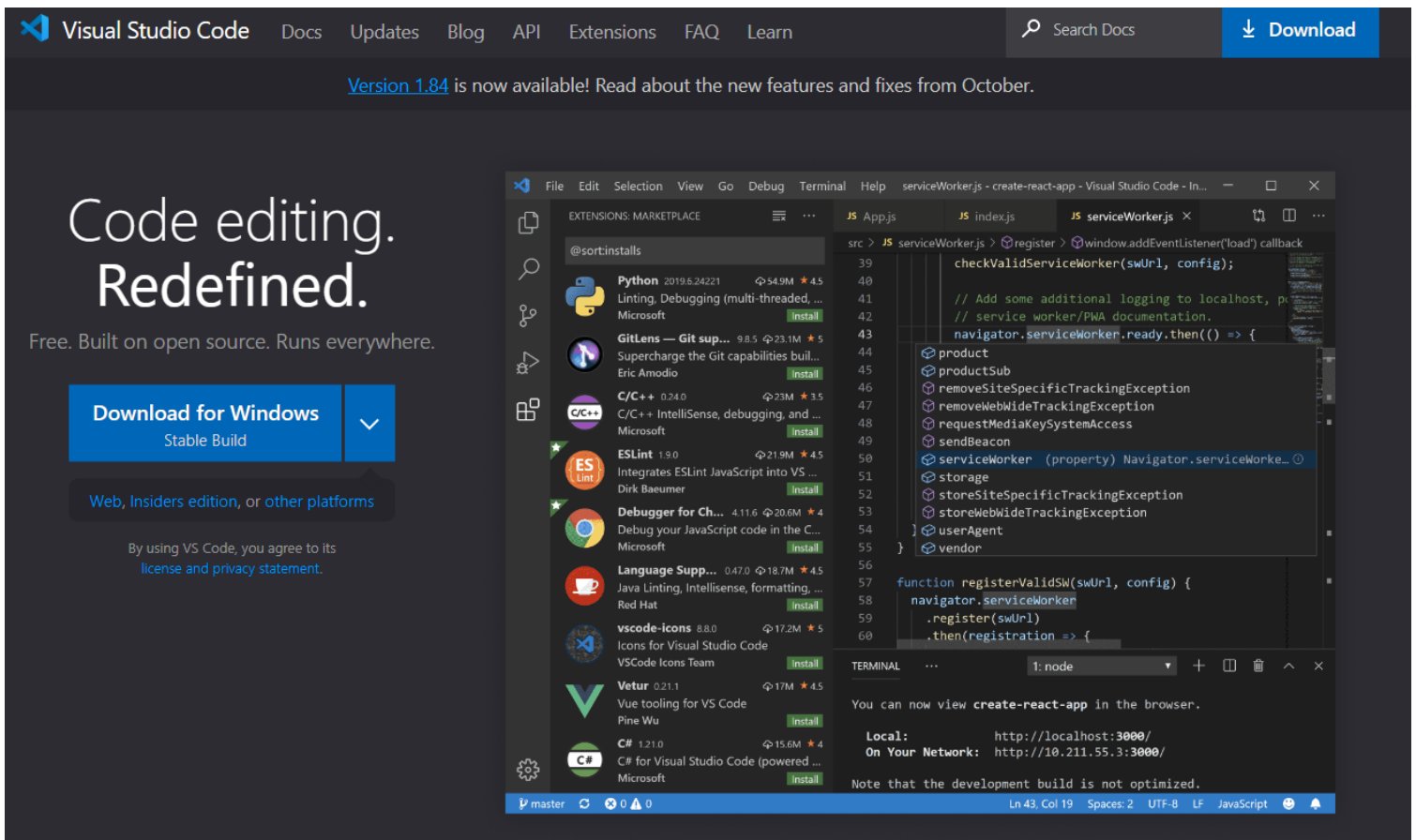
[Install .NET SDK for Linux.](#)



[Install VS Code for Linux.](#)

Once installed VS Code, you need to install a C# extension to facilitate us to code and debugging:

Install [C# extension](#).



1.1. Check the installed Fonts availability

Check that the directory with fonts `"/usr/share/fonts/truetype"` is exist. Also check that it contains `*.ttf` files.

If you don't see this folder, you may install "Microsoft TrueType core fonts" using terminal and command:

```
$ sudo apt install ttf-mscorefonts-installer
```

```
linuxconfig@linuxconfig-org: ~  
All done, no errors.  
Extracting cabinet: /var/lib/update-notifier/package-data-downloads/partial/verdan32.exe  
  extracting fontinst.exe  
  extracting fontinst.inf  
  extracting Verdanab.TTF  
  extracting Verdanai.TTF  
  extracting Verdanz.TTF  
  extracting Verdana.TTF  
  
All done, no errors.  
Extracting cabinet: /var/lib/update-notifier/package-data-downloads/partial/webdin32.exe  
  extracting fontinst.exe  
  extracting Webdings.TTF  
  extracting fontinst.inf  
  extracting Licen.TXT  
  
All done, no errors.  
All fonts downloaded and installed.  
Processing triggers for man-db (2.9.0-2) ...  
Processing triggers for fontconfig (2.13.1-2ubuntu2) ...  
linuxconfig@linuxconfig-org:~$
```

Read more about [TrueType Fonts](#) and ["How to install Microsoft fonts, How to update fonts cache files, How to confirm new fonts installation"](#) .

In next paragraphs we will explain in detail how to create simple console application. All of them are based on this VS Code guide:

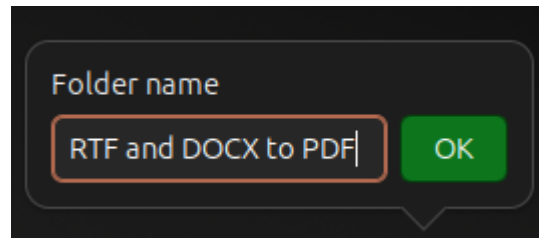
[Get Started with C# and Visual Studio Code](#)

Not only is possible to create .NET applications that will run on Linux using Linux as a developing platform. It is also possible to create it using a Windows machine and any modern Visual Studio version, as Microsoft Visual Studio Community 2022.

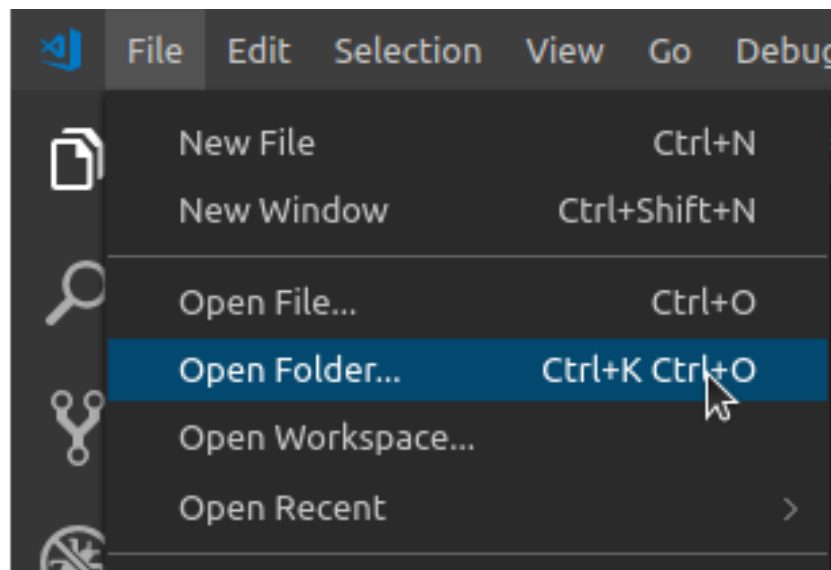
2. Creating “Convert RTF/DOCX to PDF” app

Create a new folder in your Linux machine with the name ***RTF and DOCX to PDF***.

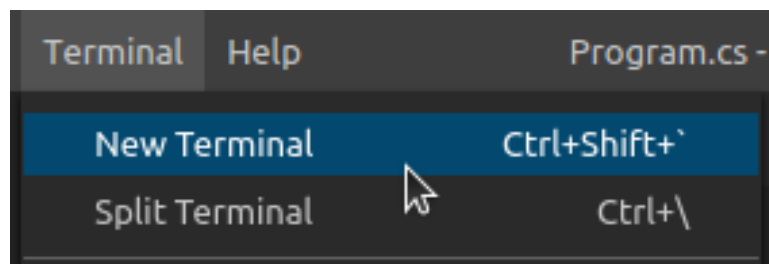
For example, let’s create the folder “***RTF and DOCX to PDF***” on Desktop (Right click-> New Folder):



Open VS Code and click in the menu ***File->Open Folder***. From the dialog, open the folder you’ve created previously:

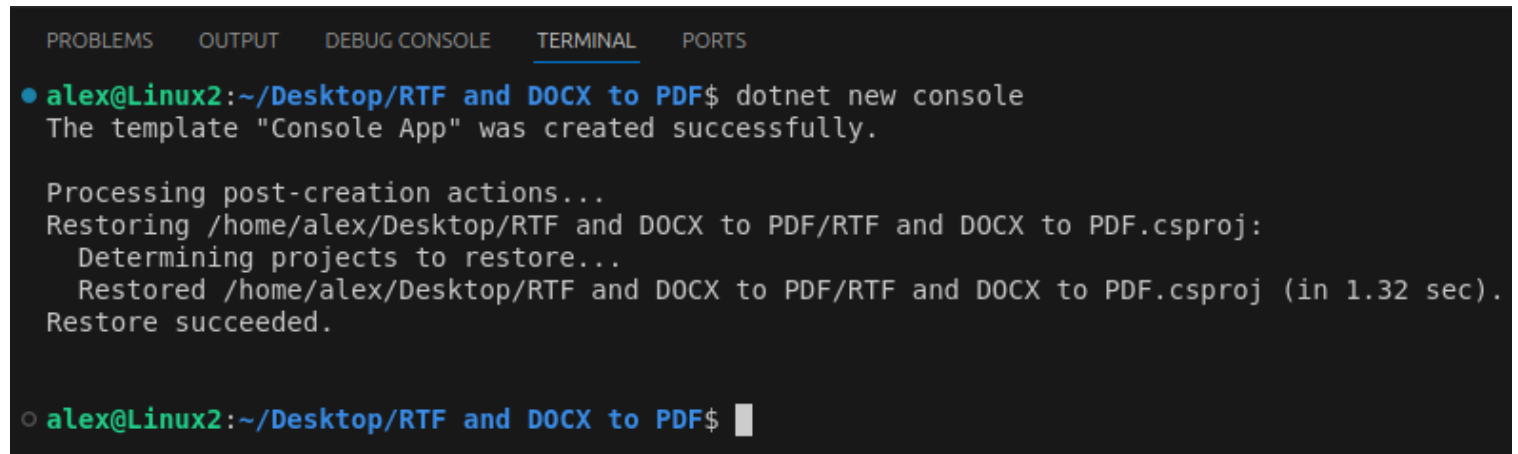


Now, open the integrated console – the Terminal: follow to the menu ***Terminal -> New Terminal*** (or press Ctrl+Shift+`):



Create a new console application, using **dotnet** command.

Type this command in the Terminal console: **dotnet new console**



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
• alex@Linux2:~/Desktop/RTF and DOCX to PDF$ dotnet new console
The template "Console App" was created successfully.

Processing post-creation actions...
Restoring /home/alex/Desktop/RTF and DOCX to PDF/RTF and DOCX to PDF.csproj:
  Determining projects to restore...
  Restored /home/alex/Desktop/RTF and DOCX to PDF/RTF and DOCX to PDF.csproj (in 1.32 sec).
Restore succeeded.

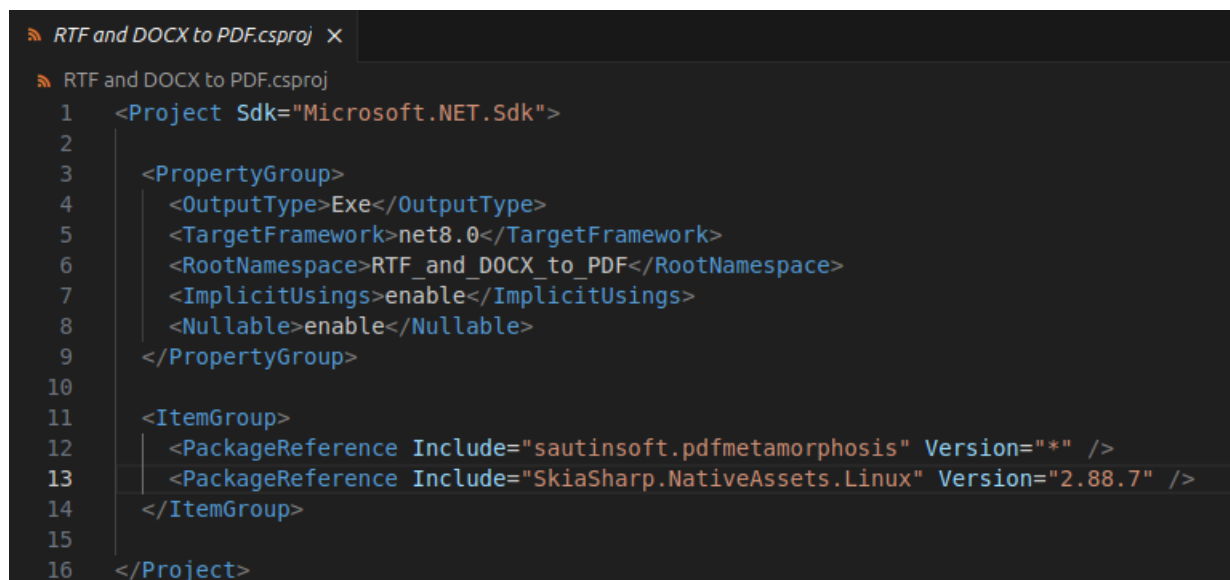
○ alex@Linux2:~/Desktop/RTF and DOCX to PDF$
```

Now we are going to modify this simple application into an application that will convert html file to rtf and docx files.

First of all, we need to add the package reference to the **sautinsoft.pdfmetamorphosis** assembly using Nuget or the library SautinSoft.PdfMetamorphosis.dll with additional references.

In order to do it, follow to the **Explorer** and open project file "**RTF and DOCX to PDF.csproj**" :

In the first case (NuGet):



```
RTF and DOCX to PDF.csproj x
RTF and DOCX to PDF.csproj
1  <Project Sdk="Microsoft.NET.Sdk">
2
3      <PropertyGroup>
4          <OutputType>Exe</OutputType>
5          <TargetFramework>net8.0</TargetFramework>
6          <RootNamespace>RTF_and_DOCX_to_PDF</RootNamespace>
7          <ImplicitUsings>enable</ImplicitUsings>
8          <Nullable>enable</Nullable>
9      </PropertyGroup>
10
11      <ItemGroup>
12          <PackageReference Include="sautinsoft.pdfmetamorphosis" Version="*" />
13          <PackageReference Include="SkiaSharp.NativeAssets.Linux" Version="2.88.7" />
14      </ItemGroup>
15
16  </Project>
```

In the second case (PdfMetamorphosis.dll):

```
RTF and DOCX to PDF.csproj X
RTF and DOCX to PDF.csproj
1  <Project Sdk="Microsoft.NET.Sdk">
2
3      <PropertyGroup>
4          <OutputType>Exe</OutputType>
5          <TargetFramework>net8.0</TargetFramework>
6          <RootNamespace>RTF_and_DOCX_to_PDF</RootNamespace>
7          <ImplicitUsings>enable</ImplicitUsings>
8          <Nullable>enable</Nullable>
9      </PropertyGroup>
10
11      <ItemGroup>
12          <PackageReference Include="Pkcs11Interop" Version="5.1.2" />
13          <PackageReference Include="Portable.BouncyCastle" Version="1.9.0" />
14          <PackageReference Include="SkiaSharp" Version="2.88.7" />
15          <PackageReference Include="SkiaSharp.HarfBuzz" Version="2.88.7" />
16          <PackageReference Include="Svg.Skia" Version="1.0.0.18" />
17          <PackageReference Include="System.IO.Packaging" Version="4.5.0" />
18          <PackageReference Include="System.Text.Encoding.CodePages" Version="4.5.0" />
19          <PackageReference Include="SkiaSharp.NativeAssets.Linux" Version="2.88.7" />
20          <Reference Include="PdfMetamorphosis">
21              <HintPath>/YourPathToDll/PdfMetamorphosis.dll</HintPath>
22          </Reference>
23      </ItemGroup>
24
25  </Project>
```

At once as we've added the package references, we have to restore the added packages.

Follow to the **Terminal** and type the command: **dotnet restore**

```
• alex@Linux2:~/Desktop/RTF and DOCX to PDF$ dotnet restore
Determining projects to restore...
Restored /home/alex/Desktop/RTF and DOCX to PDF/RTF and DOCX to PDF.csproj (in 1.72 min)
```

Good, now our application has all the references and we can write the code to convert RTF and DOCX to PDF format.

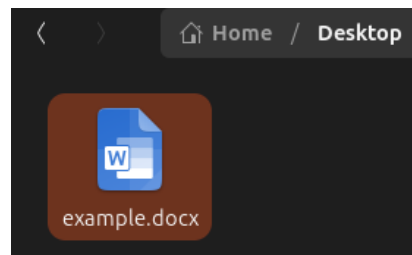
Follow to the **Explorer**, open the **Program.cs**, remove all the code and type the new:

```
Program.cs - RTF and DOCX to PDF - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER
RTF AND DOCX TO PDF
  bin
  obj
  Program.cs
  RTF and DOCX to PDF.csproj
  RTF and DOCX to PDF.sln
Program.cs X
1  namespace RTF_and_DOCX_to_PDF
2  {
3      0 references
4      class Program
5      {
6          0 references
7          static void Main(string[] args)
8          {
9              SautinSoft.PdfMetamorphosis p = new SautinSoft.PdfMetamorphosis();
10             string docxFile = @"/home/alex/Desktop/example.docx";
11             string pdfFile = @"/home/alex/Desktop/example.pdf";
12             if (p.DocxToPdfConvertFile(docxFile, pdfFile) == 0)
13                 System.Diagnostics.Process.Start(new System.Diagnostics.ProcessStartInfo(pdfFile) { UseShellExecute = true });
14             else
15             {
16                 Console.WriteLine("Conversion failed!");
17                 Console.ReadLine();
18             }
19         }
20     }
21 }
```

The code:

```
namespace RTF_and_DOCX_to_PDF
{
    class Program
    {
        static void Main(string[] args)
        {
            SautinSoft.PdfMetamorphosis p = new SautinSoft.PdfMetamorphosis();
            string docxFile = @"/home/alex/Desktop/example.docx";
            string pdfFile = @"/home/alex/Desktop/example.pdf";
            if (p.DocxToPdfConvertFile(docxFile, pdfFile) == 0)
                System.Diagnostics.Process.Start(new
                    System.Diagnostics.ProcessStartInfo(pdfFile) { UseShellExecute = true });
            else
            {
                Console.WriteLine("Conversion failed!");
                Console.ReadLine();
            }
        }
    }
}
```

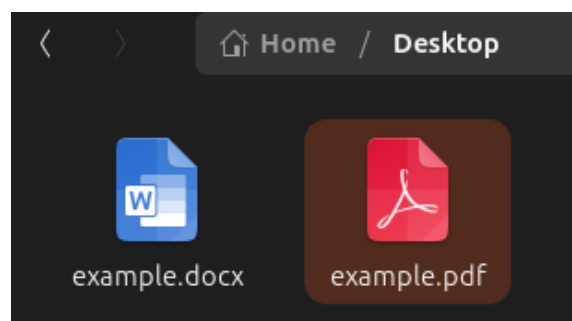
To make tests, we need an input DOCX document. For our tests, let's place the DOCX file with the name "example.docx" at the Desktop.



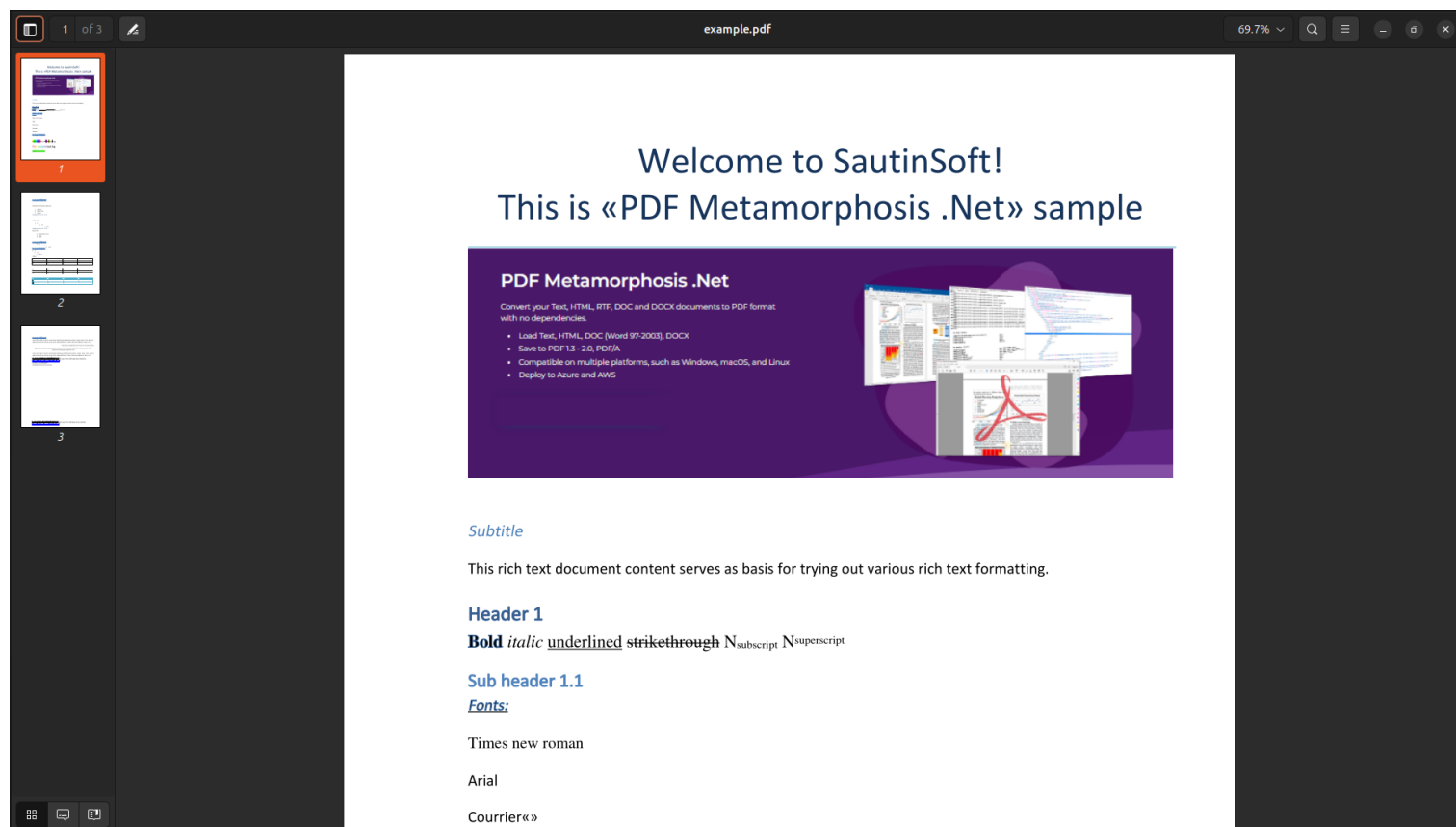
Launch our application and RTF and DOCX to PDF, type the command: ***dotnet run***

If you don't see any exceptions, everything is fine and we can check the result produced by the [PDF Metamorphosis .Net](#) library.

The new file "example.pdf" has to appear on the Desktop:



If we open this file in the default PDF Viewer, we'll see its content:



Well done! You have created the “RTF and DOCX to PDF” application under Linux!

If you have any troubles or need extra code, or help, don't hesitate to ask our SautinSoft Team at support@sautinsoft.com!