

# UiPath Custom Activity to Edit a PDF

UiPath.PDF.Activities pack allows users to perform various actions on PDF, like reading pdf data, splitting pdf pages, etc. however, what if we want to edit a PDF? Even if we are filling data into a simple document such as a form, does Acrobat DC or any other pdf editing tool license always need to be purchased? Absolutely not.

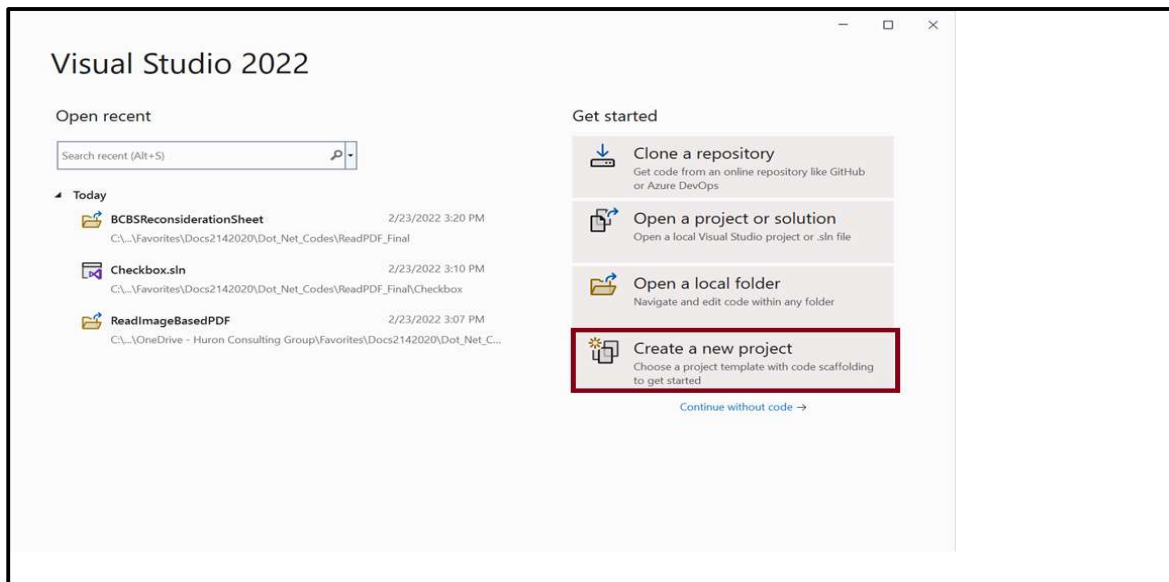
I am writing this post with the intention of showing you how you can create a custom activity to edit a pdf or fill in data in a form that is in the form of a pdf.

Listed below are the major steps involved in creating and adding a custom activity to UiPath –

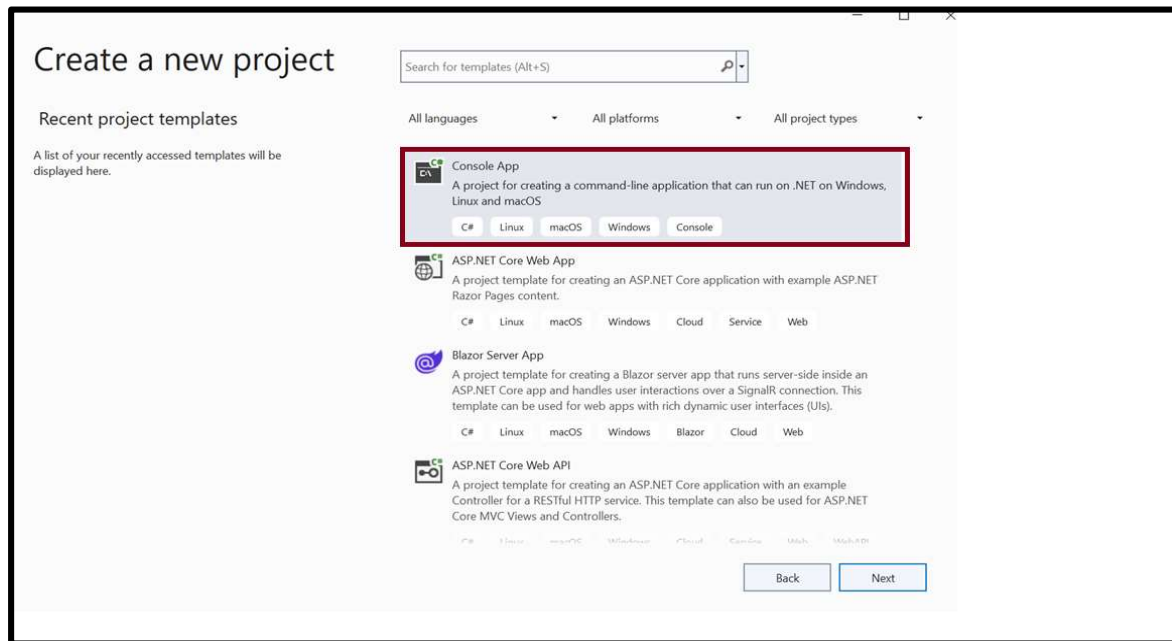
1. Develop a console application in C# to read the field names from pdf.
2. Create the custom activity code to target the fields to edit the pdf file.
3. Convert the DLL generated from step 2 to NuGet package.
4. Configure UiPath Studio to use the NuGet package generated from step 2.

## Developing a console application in C# to read the field names from pdf

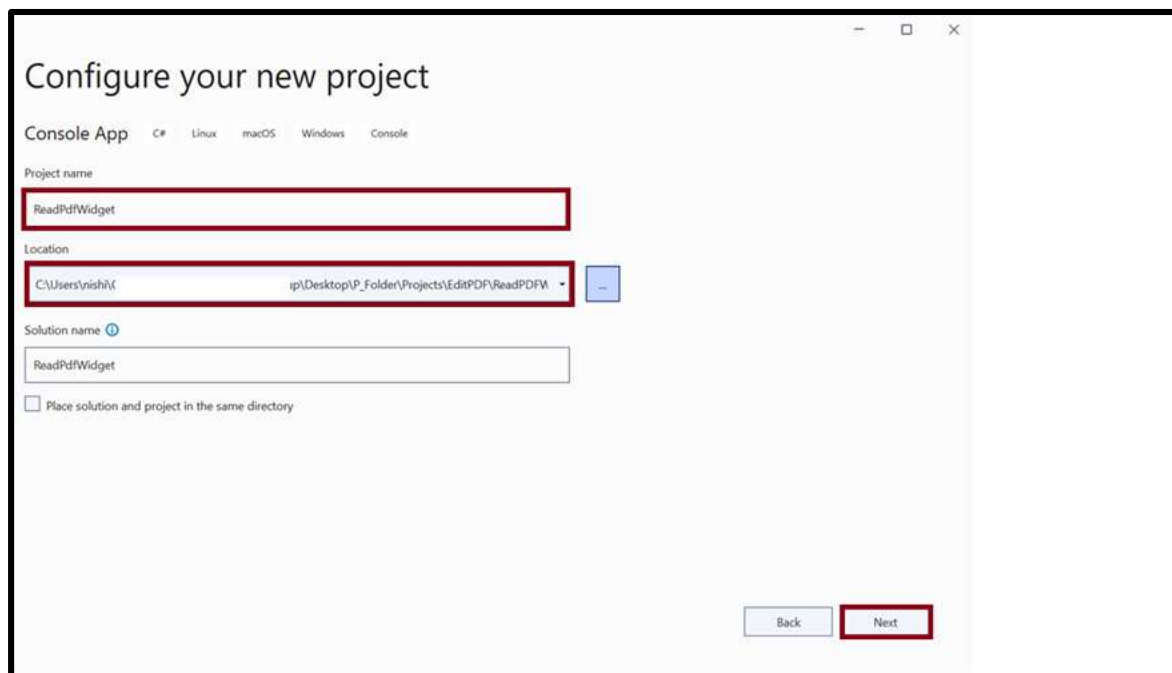
1. Open Visual Studio and click on Create a new project.



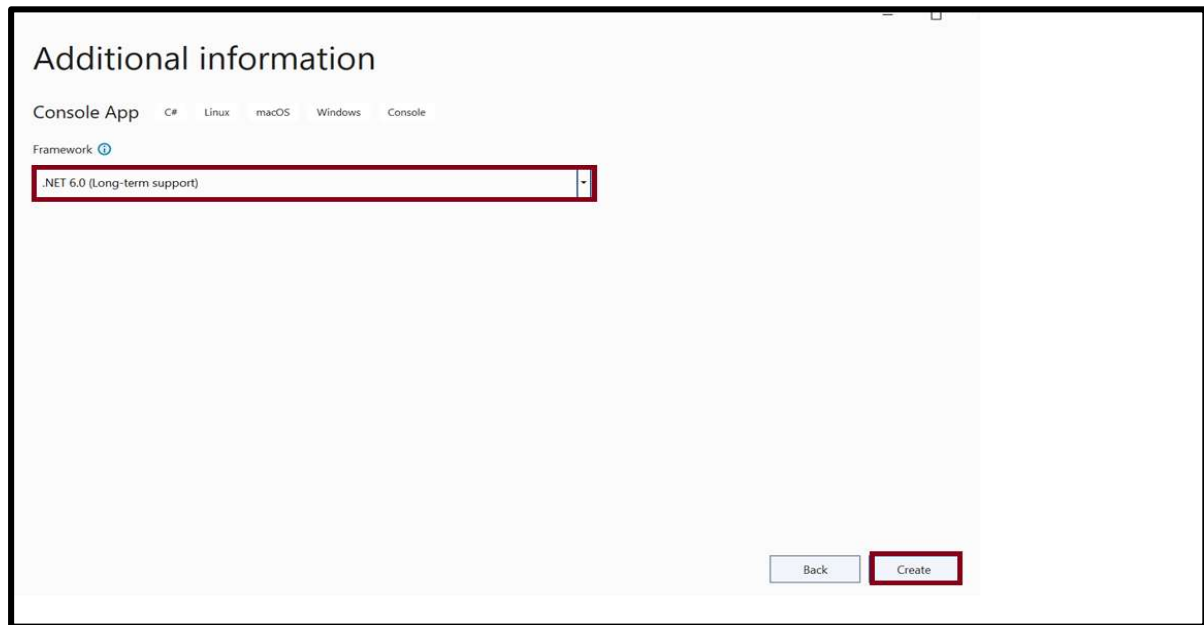
## 2. Select Console App from the templates and click on Next.



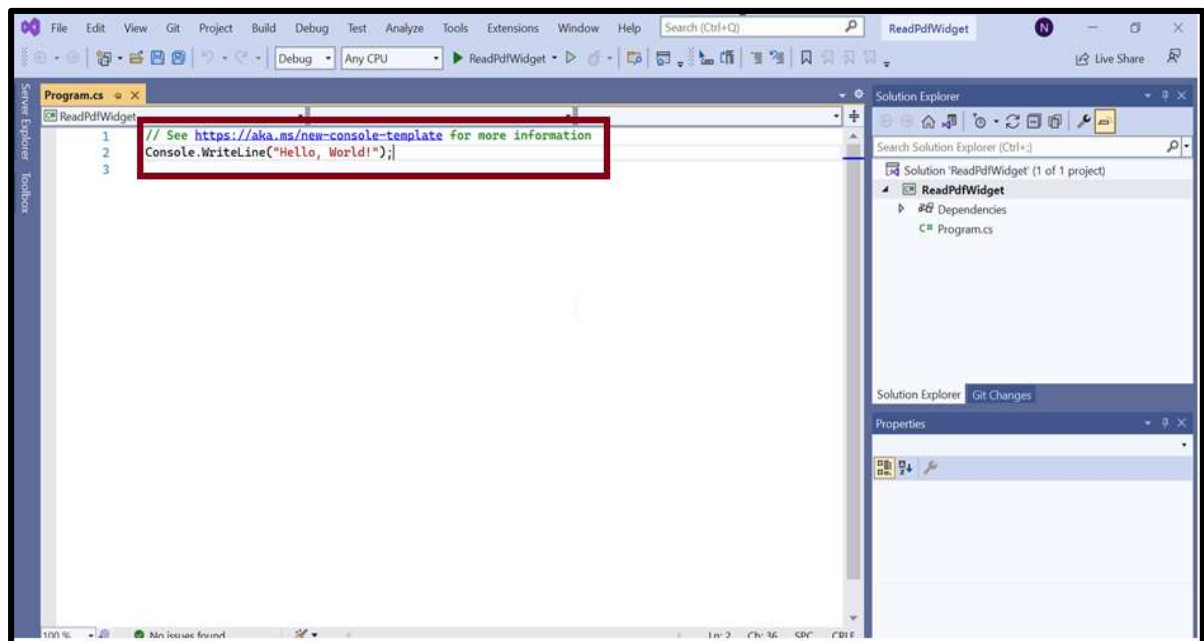
## 3. Type in your Project name and choose the location where you want to save your project and click on Next.



4. Choose the target framework in which you want to build your project and click on Create. (I have used .Net 6.0.)

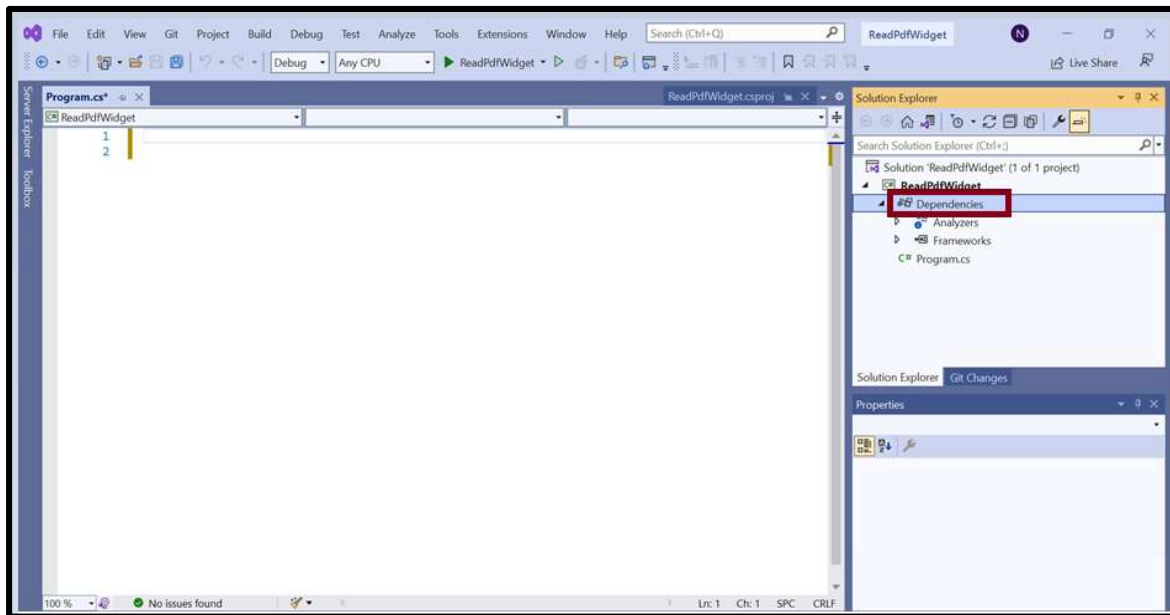


5. Remove all the existing code from the Program.cs file.

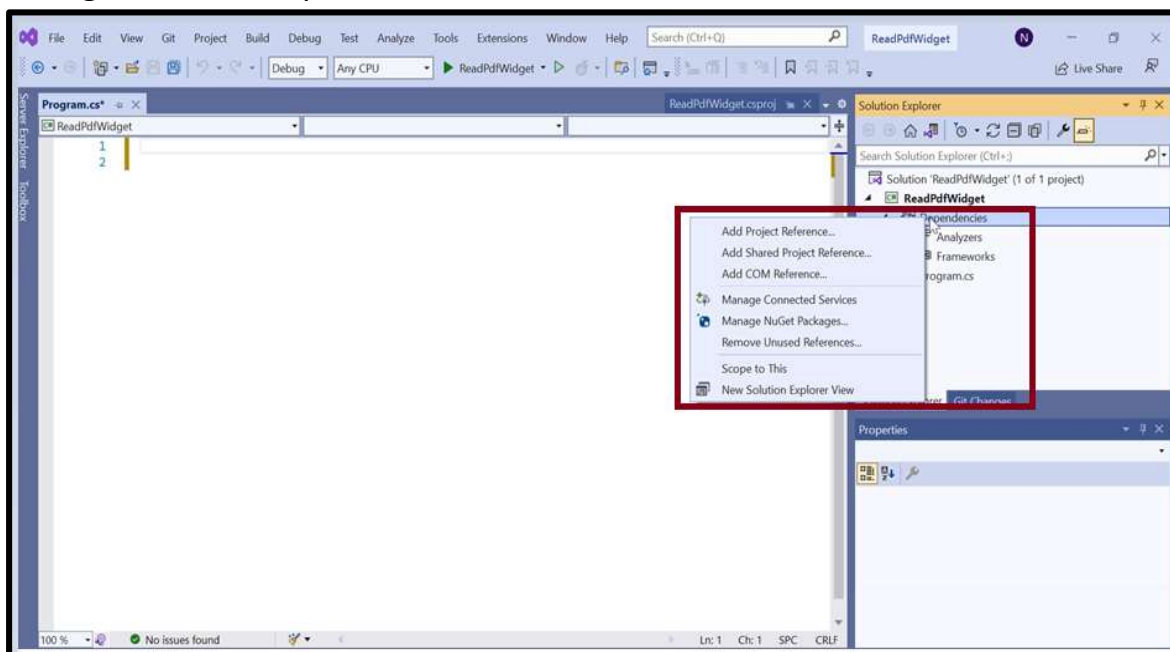


The next step is to add the required dependencies to get the field names from the pdf.

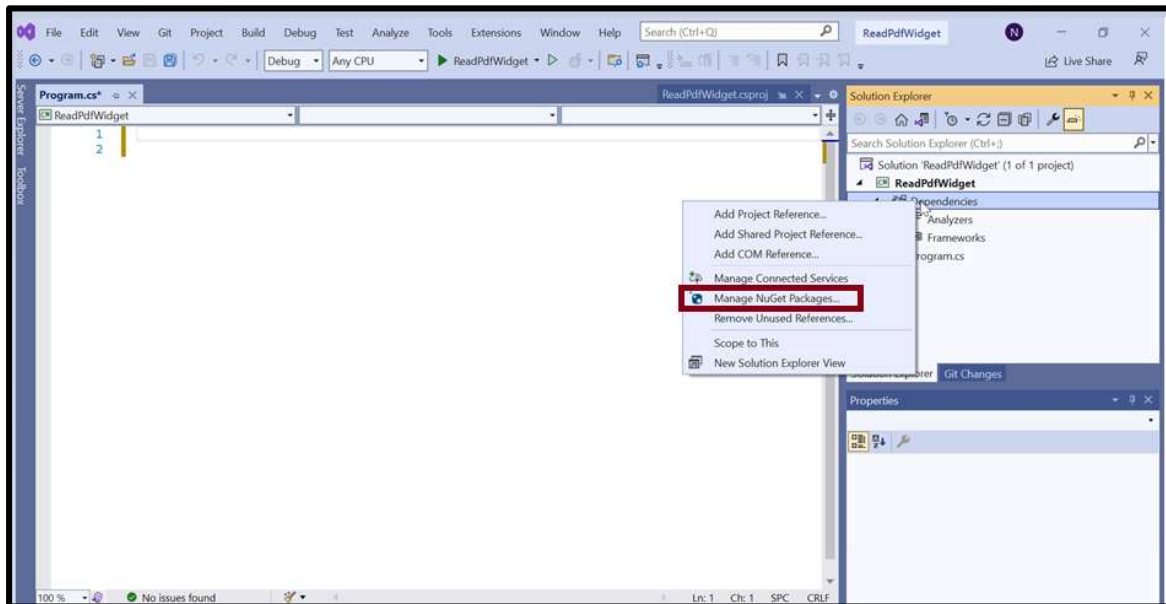
## 6. Select Dependencies on the right pane.



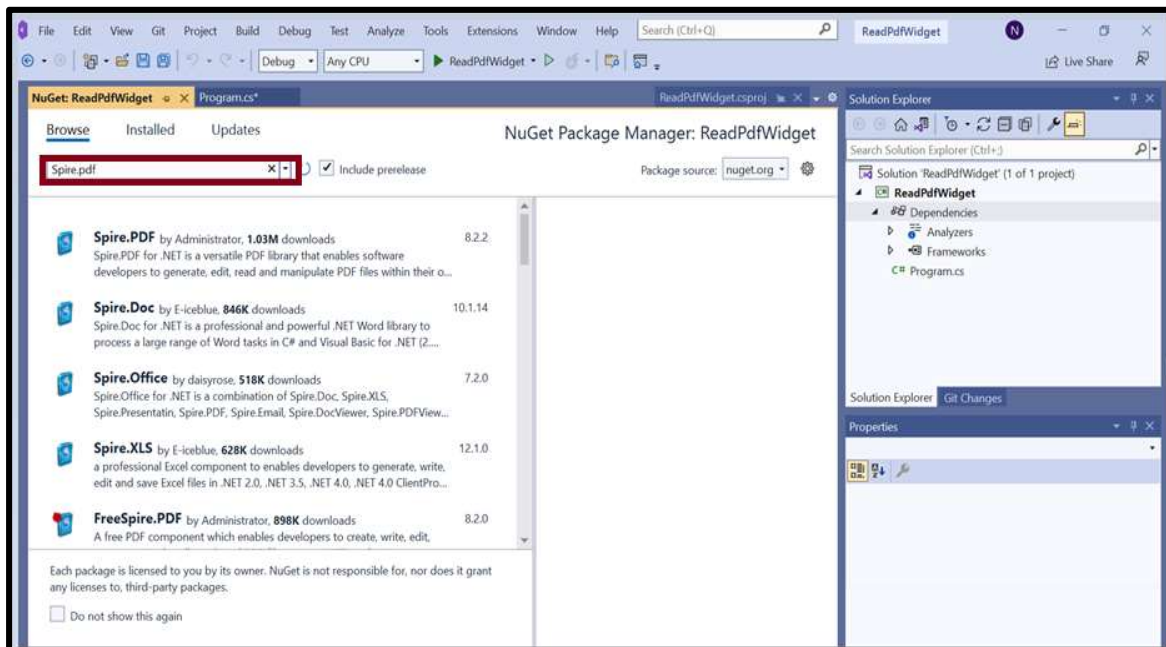
## 7. Right click on Dependencies.



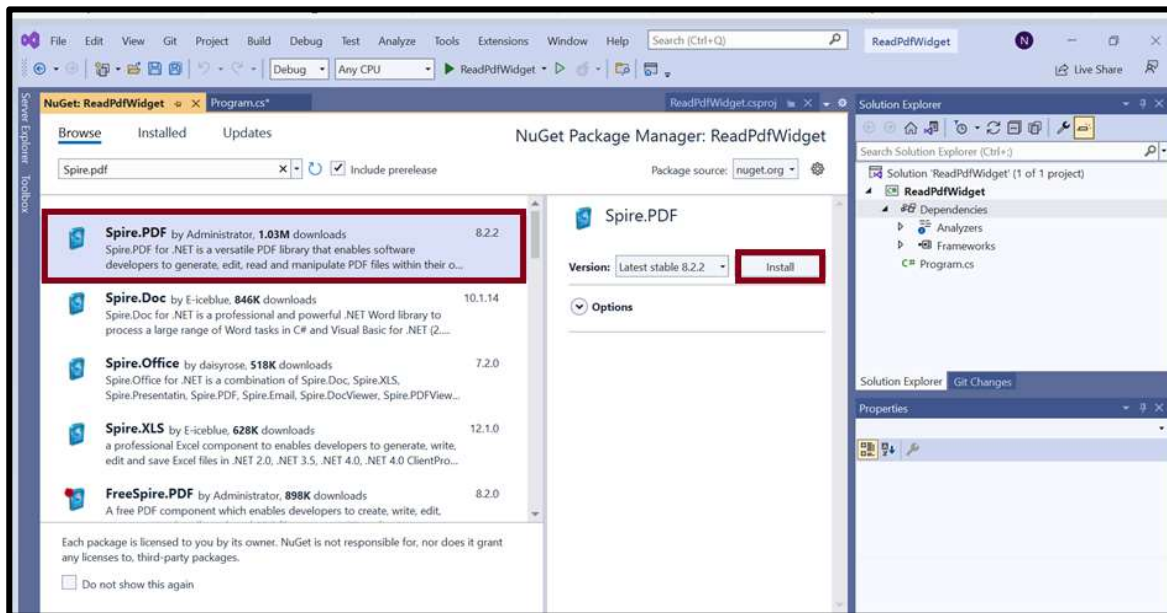
## 8. Select Manage Nuget Packages.



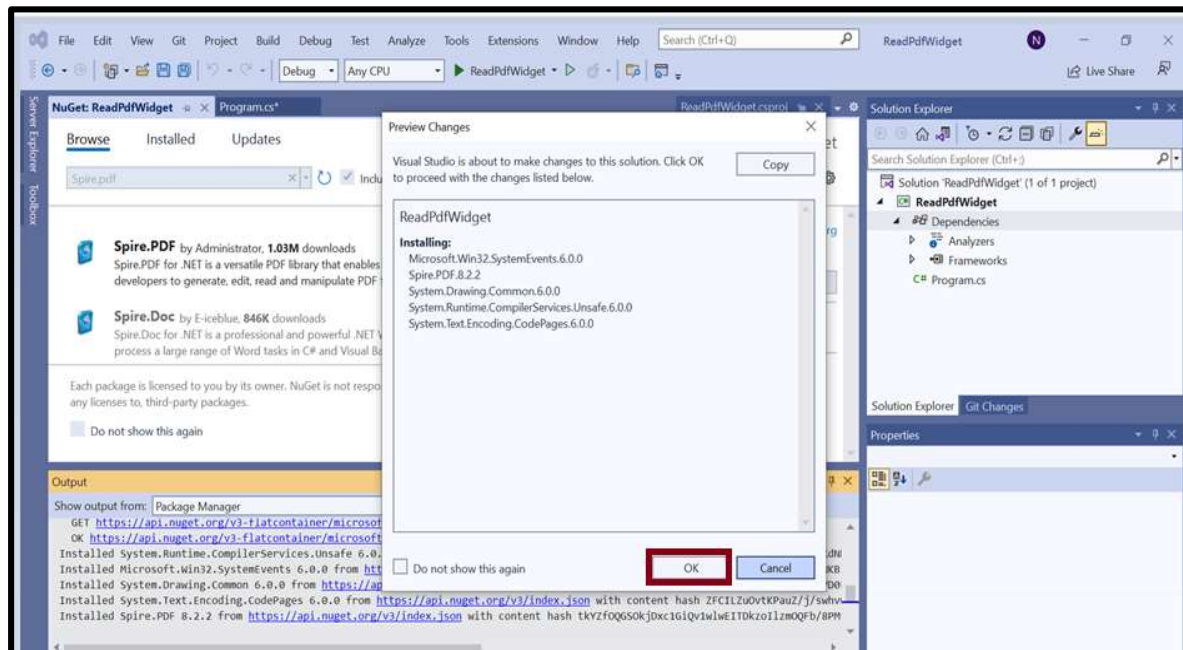
## 9. Type in Spire.pdf



## 10. Select Spire.PDF and click on Install



## 11. Click on OK.



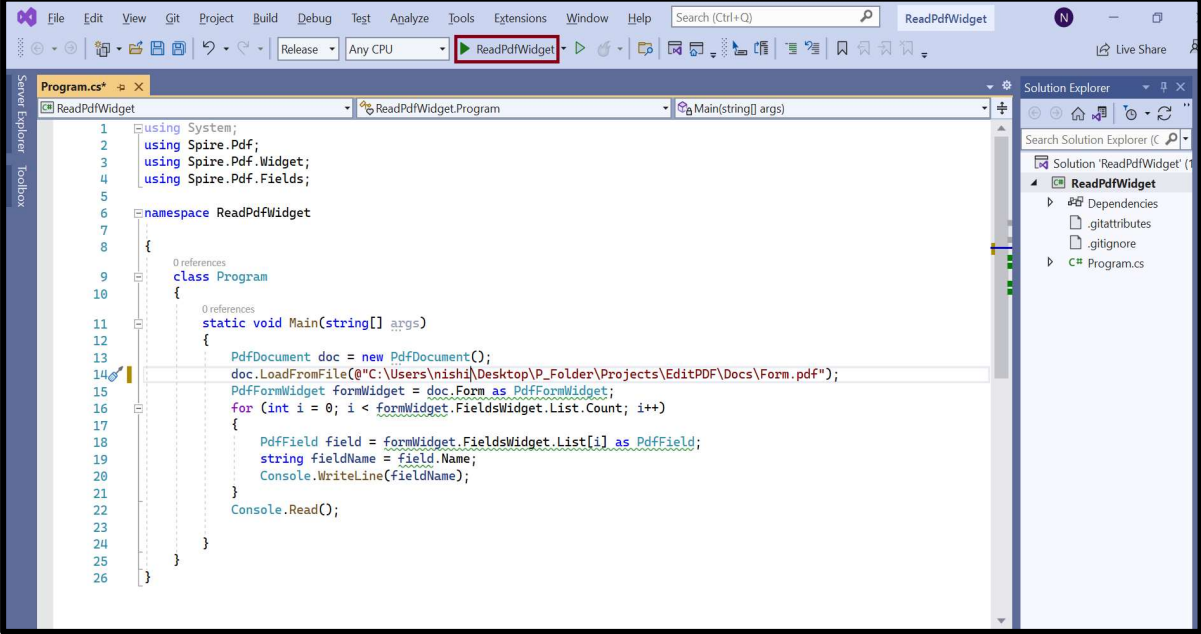
12. Copy the code from the repository – <https://github.com/Nishi80100/ReadPdfWidget>. Specify the pdf file path which you want to edit in the highlighted region.



```
using System;
using Spire.Pdf;
using Spire.Pdf.Widget;
using Spire.Pdf.Fields;

namespace ReadPdfWidget
{
    class Program
    {
        static void Main(string[] args)
        {
            PdfDocument doc = new PdfDocument();
            doc.LoadFromFile(@"C:\Users\nishi\Favorites\Docs\2142020\Dot Net Codes\PDF\Form1.pdf");
            PdfFormWidget formWidget = doc.Form as PdfFormWidget;
            for (int i = 0; i < formWidget.FieldsWidget.List.Count; i++)
            {
                PdfField field = formWidget.FieldsWidget.List[i] as PdfField;
                string fieldName = field.Name;
                Console.WriteLine(fieldName);
            }
            Console.Read();
        }
    }
}
```

13. Build and run your solution.

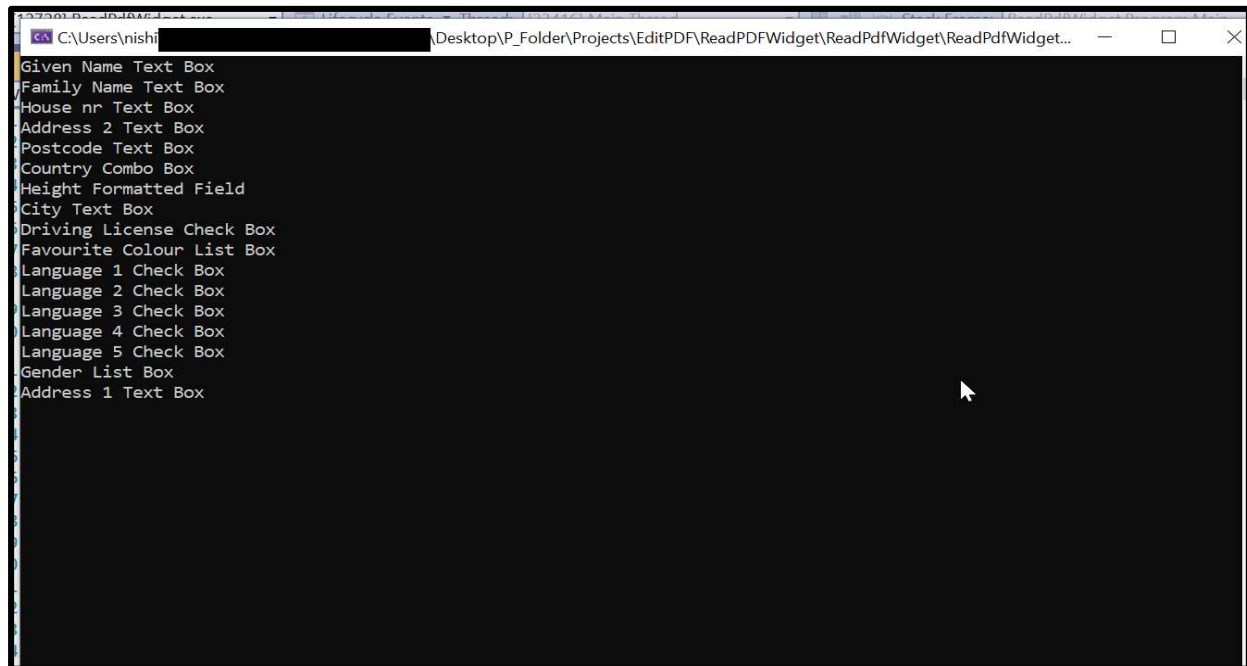


```
using System;
using Spire.Pdf;
using Spire.Pdf.Widget;
using Spire.Pdf.Fields;

namespace ReadPdfWidget
{
    class Program
    {
        static void Main(string[] args)
        {
            PdfDocument doc = new PdfDocument();
            doc.LoadFromFile(@"C:\Users\nishi\Desktop\P_Folder\Projects\EditPDF\Docs\Form.pdf");
            PdfFormWidget formWidget = doc.Form as PdfFormWidget;
            for (int i = 0; i < formWidget.FieldsWidget.List.Count; i++)
            {
                PdfField field = formWidget.FieldsWidget.List[i] as PdfField;
                string fieldName = field.Name;
                Console.WriteLine(fieldName);
            }
            Console.Read();
        }
    }
}
```

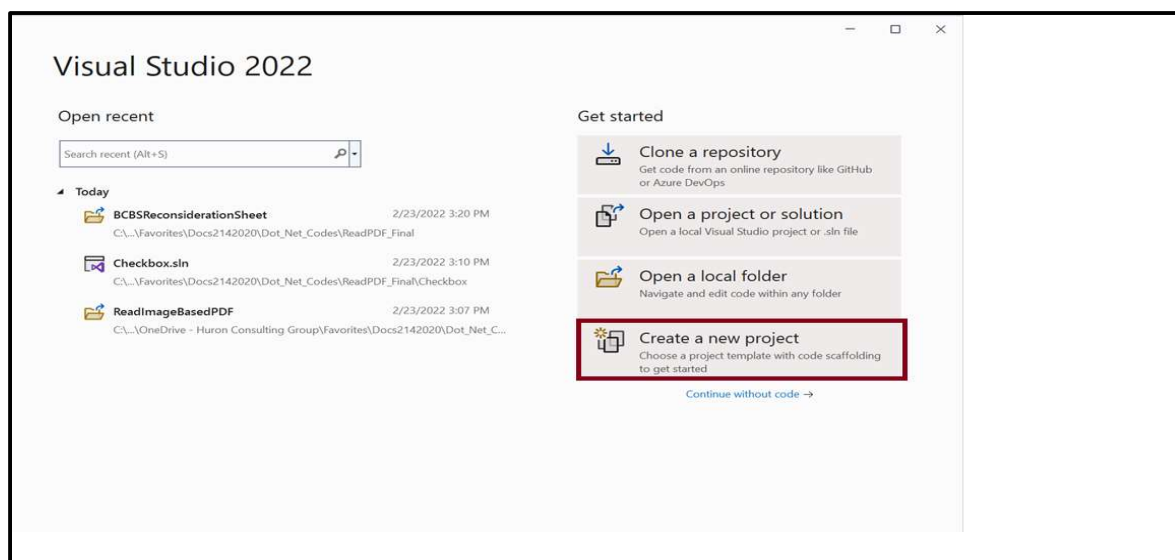


14. The output will list all the text fields associated with the pdf. Make a note of all the field names.



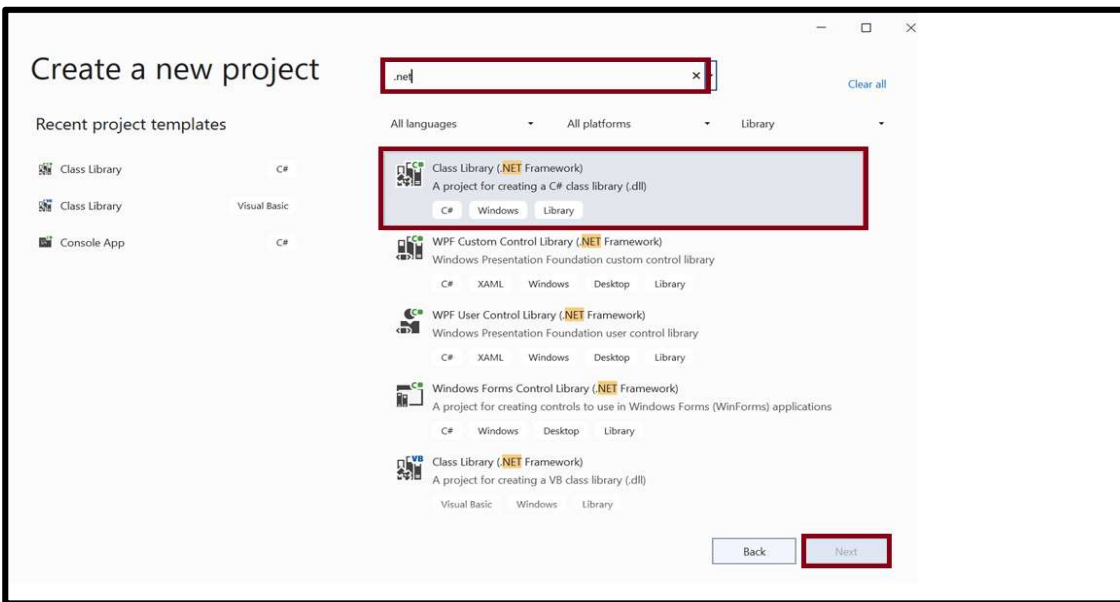
## Creating the custom activity code to edit PDF files by targeting the appropriate fields

1. Open Visual Studio and click on Create a new project.

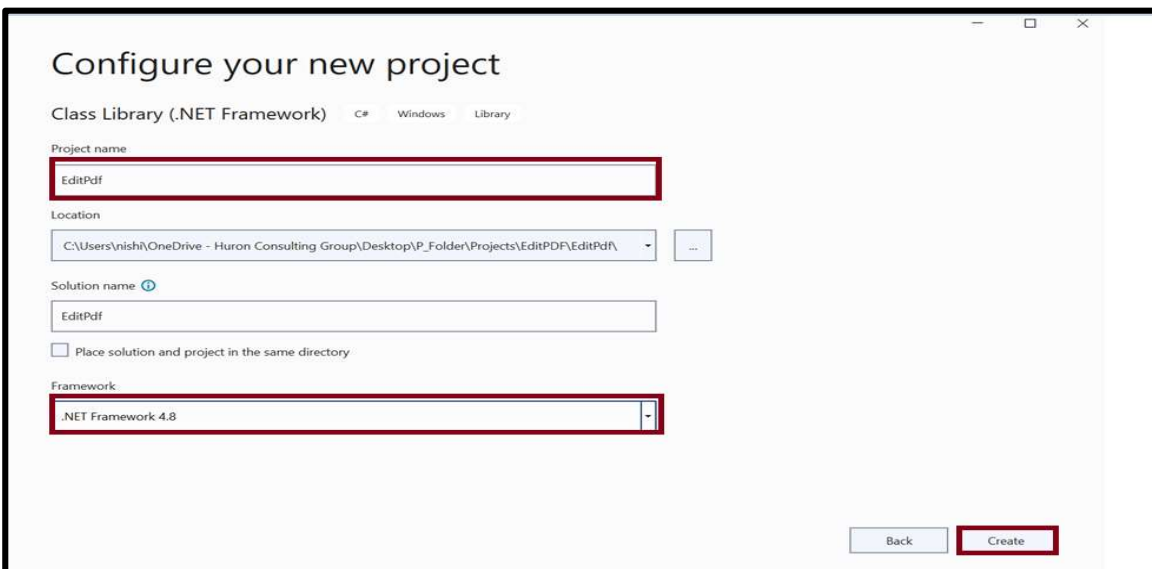




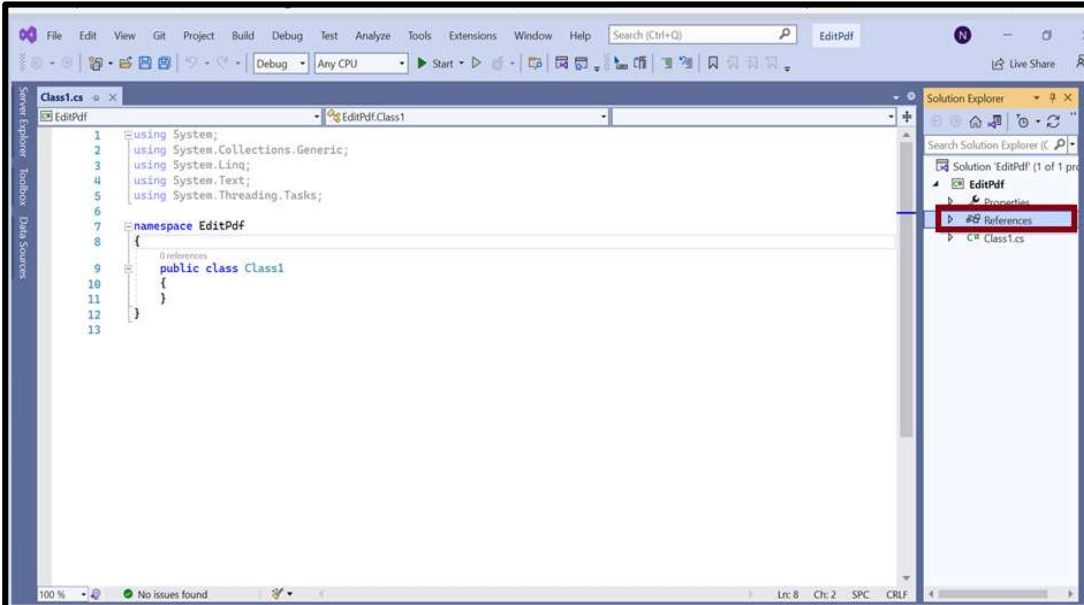
2. In the search bar, type .net and then select Class Library (.NET Framework) and click Next.



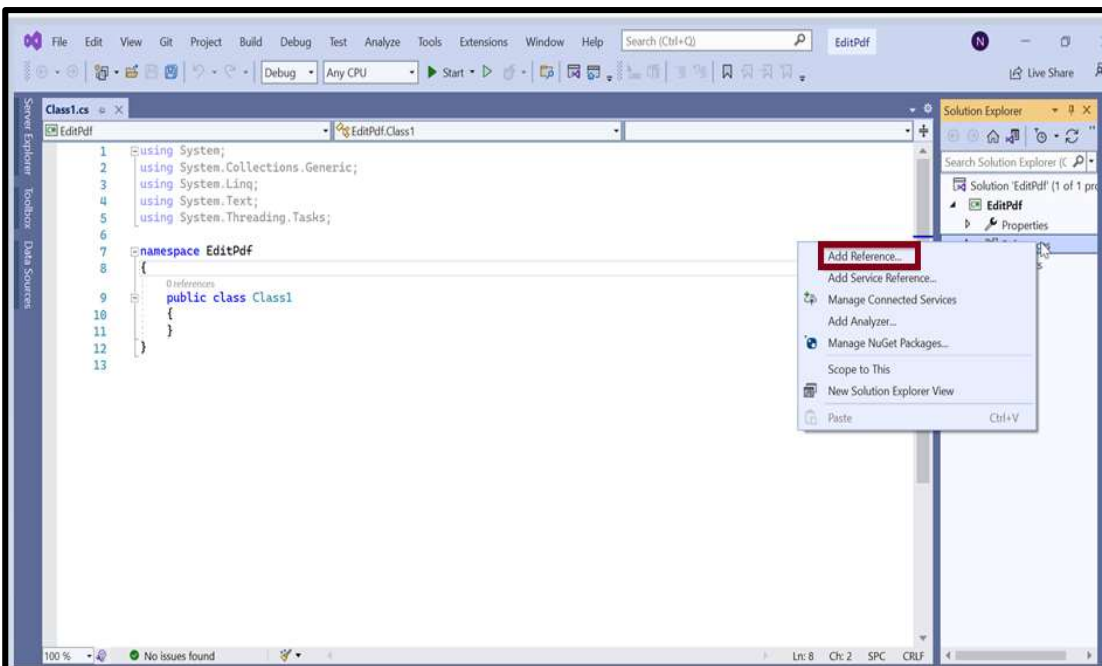
3. Choose the target framework in which you want to build your custom activity and click on Create. (I have used .Net Framework 4.8)



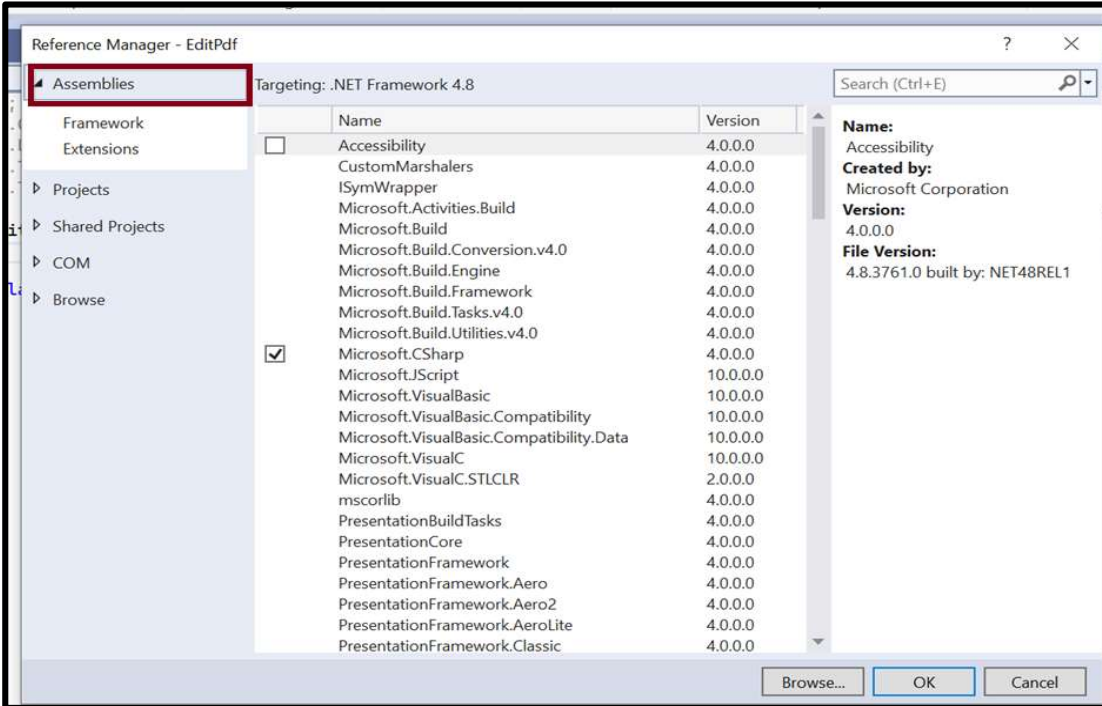
4. Select References from the top in the right pane.



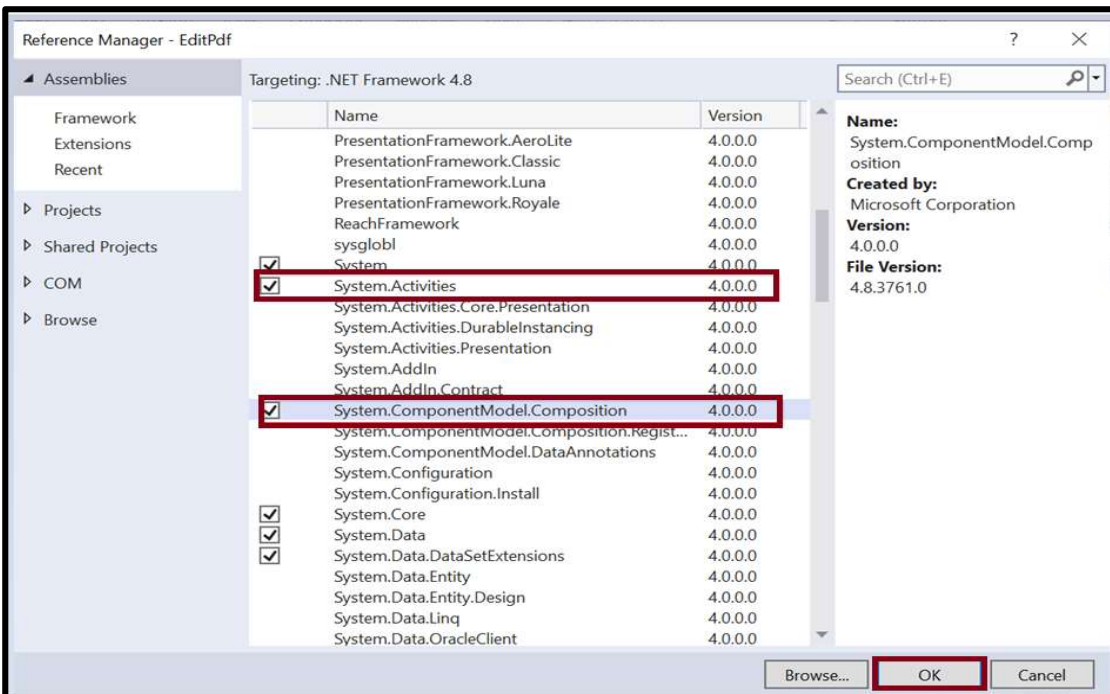
5. Right click on References and select Add Reference.



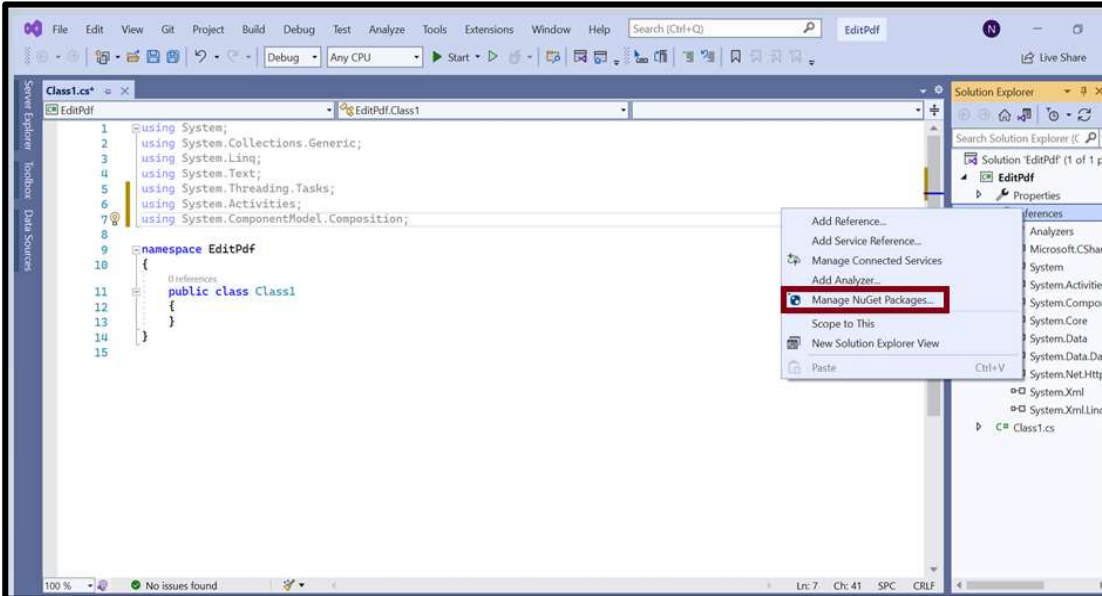
6. Select Assemblies from the top in the left pane.



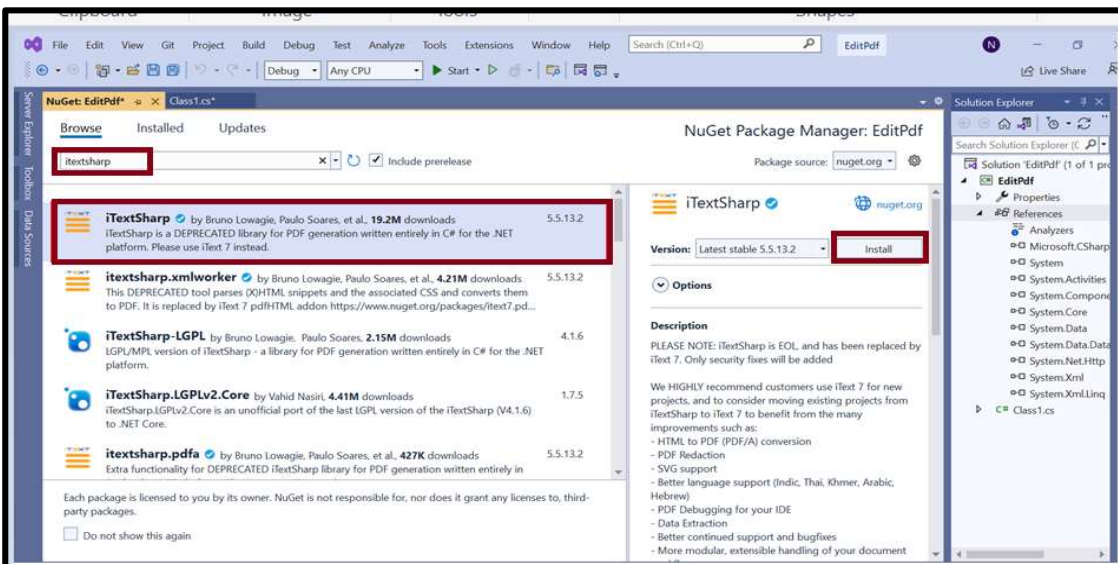
7. Select the highlighted assemblies and click on OK.



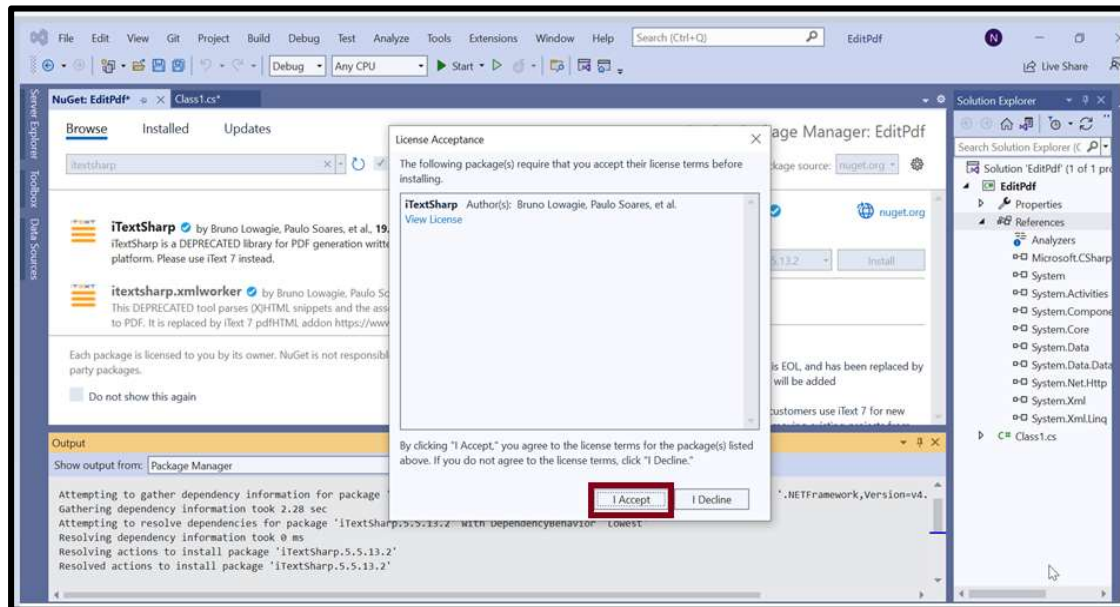
8. Right-click on References in the right pane and select Manage NuGet Packages.



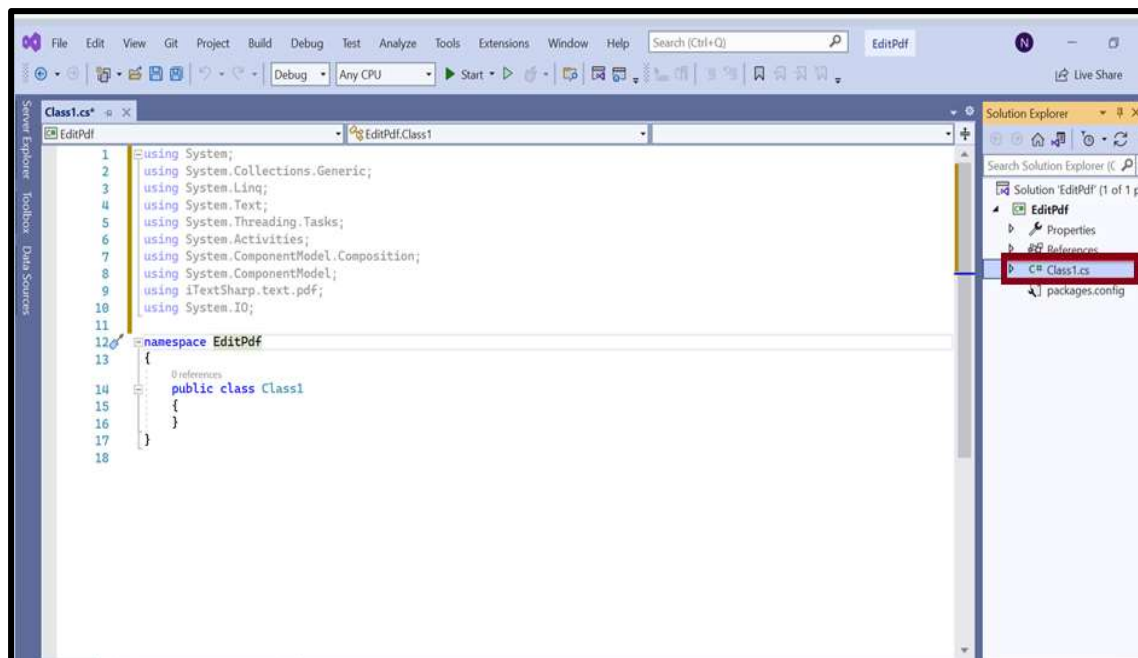
9. Type in itextsharp in the search bar. Select iTextSharp NuGet Package and click on Install.



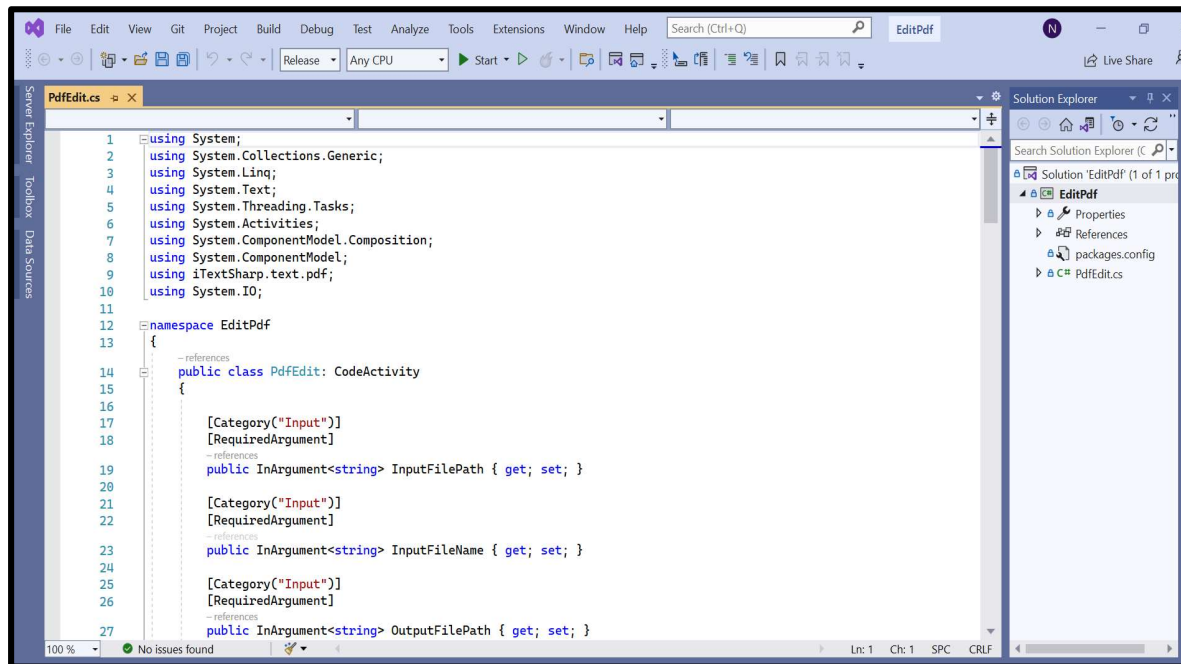
10. Click on I Accept if you agree with the license terms for the package.



11. Right-click the class1.cs file and select Rename.



12. Copy the code from the repository - <https://github.com/Nishi80100/EditPdf>



13. Understanding the necessary modifications based on your pdf file.

Input pdf file:

Please fill out the following fields. Important fields are marked yellow.

Given Name:	<input type="text"/>	
Family Name:	<input type="text"/>	
Address 1:	<input type="text"/>	House nr: <input type="text"/>
Address 2:	<input type="text"/>	
Postcode:	<input type="text"/>	City: <input type="text"/>
Country:	<input type="text"/>	
Gender:	<input type="text" value="Man"/>	
Height (cm):	<input type="text" value="150"/>	
Driving License:	<input type="checkbox"/>	



## Code Modification:

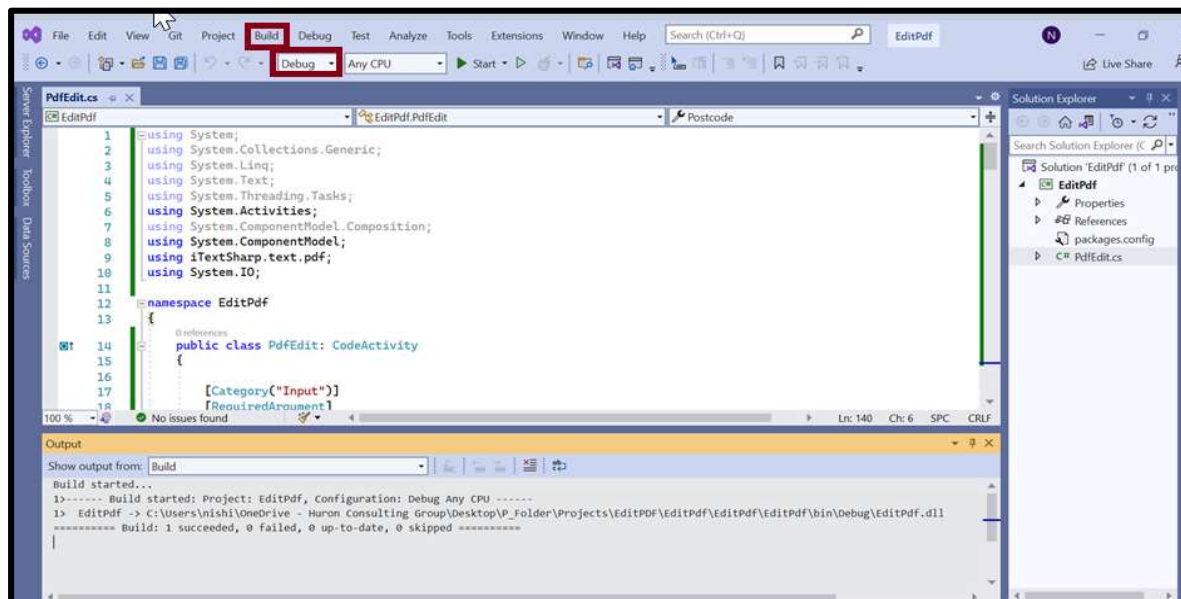
```
[Category("Input")]
[RequiredArgument]
1 reference
public InArgument<string> GivenName { get; set; }
```

So, as you can see, I need to fill in the data against GivenName in the Input pdf file so I've specified the field Given Name in my code. The same applies to your pdf file.

```
string givenName = GivenName.Get(context);
fields.SetField("Given Name Text Box", givenName)
```

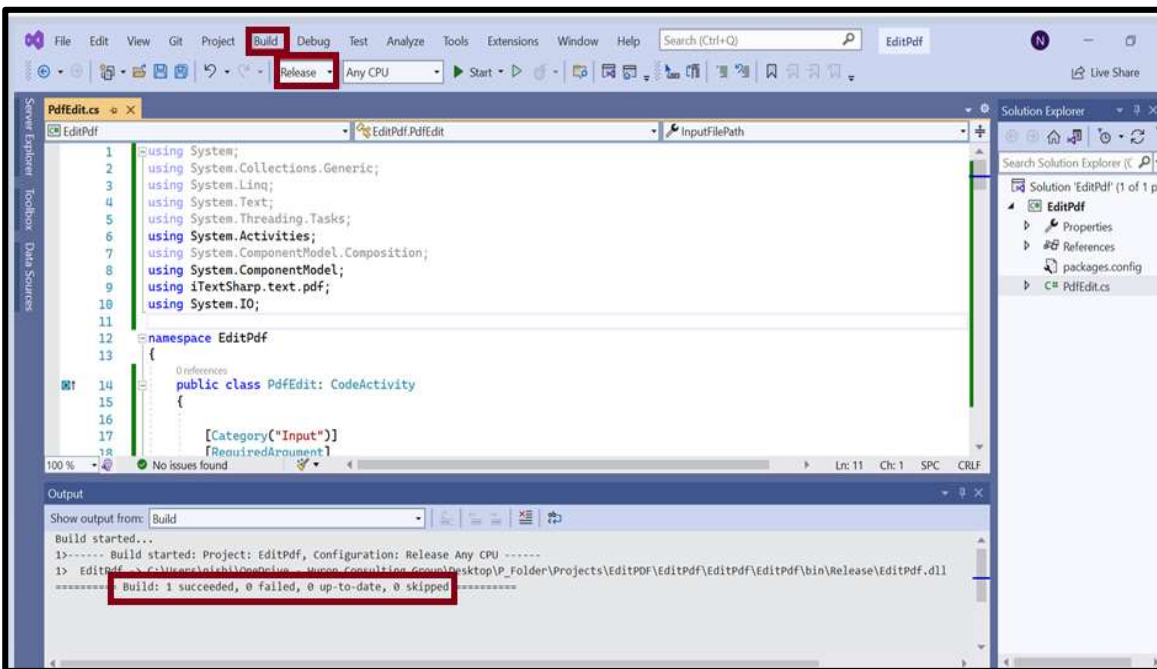
In this case, **givenName** represents the string that will be used to store the user input. Replace it with the name that fits your pdf file best. In the previous step, we declared the field name **GivenName**. **Given Name Text Box** represents the field names that we have received as final output after following the steps mentioned under 'Developing a console application in C# to read the field names from pdf'.

14. Select the execution mode as Debug, then build, and finally click on Build Solution.



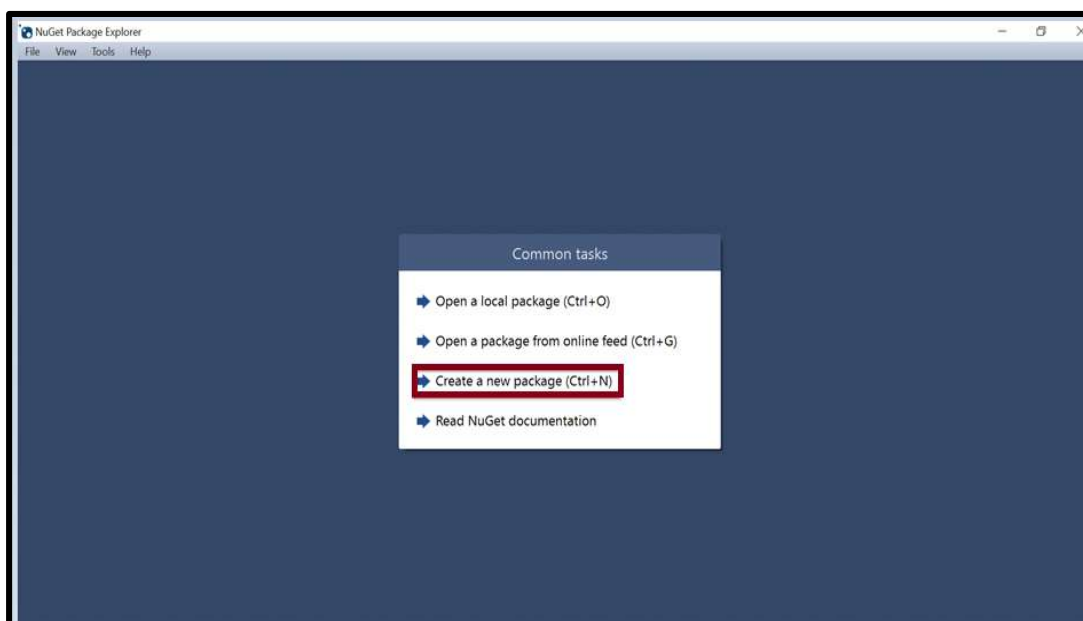


15. Select the execution mode as Release, then build, and finally click on Build solution. Ensure that your build has succeeded.

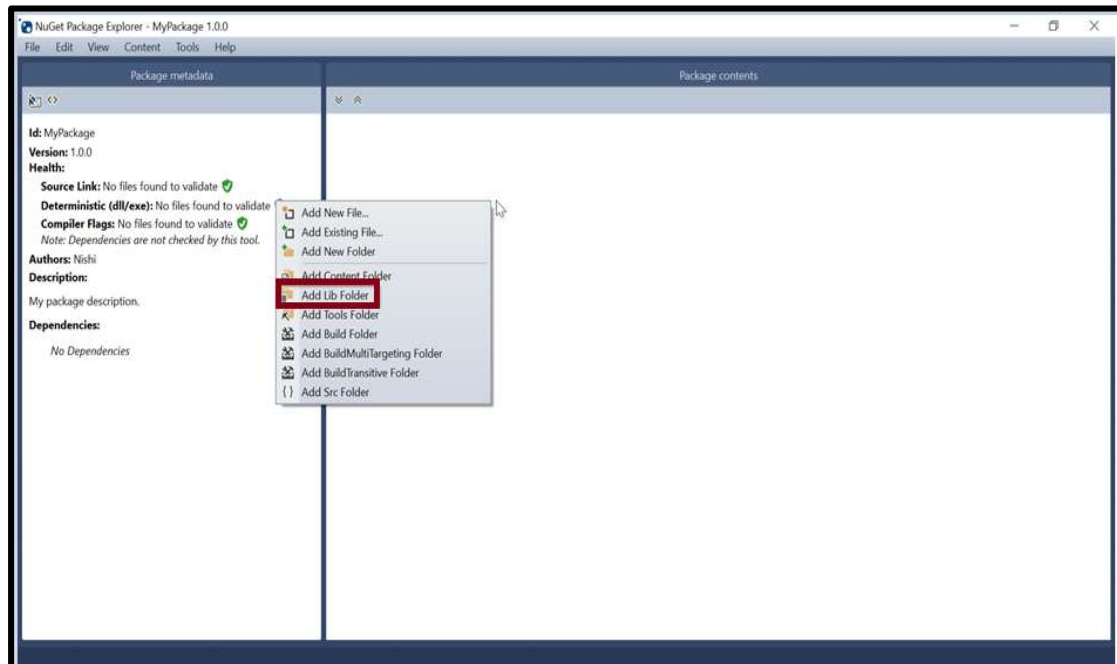


## Converting DLL generated from above step to NuGet package

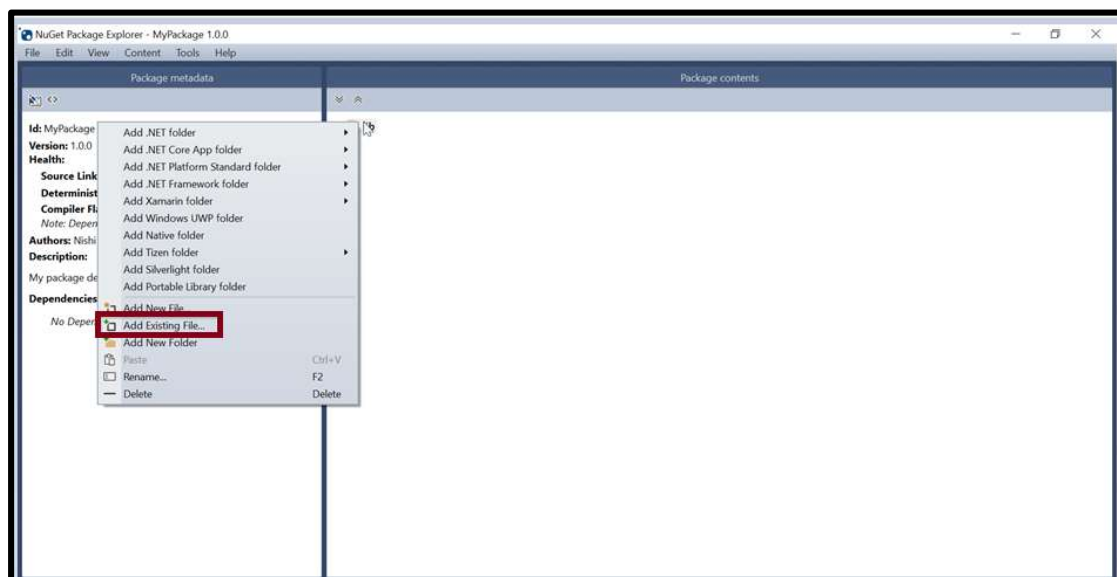
1. Open Nuget package explorer and select create a new package.



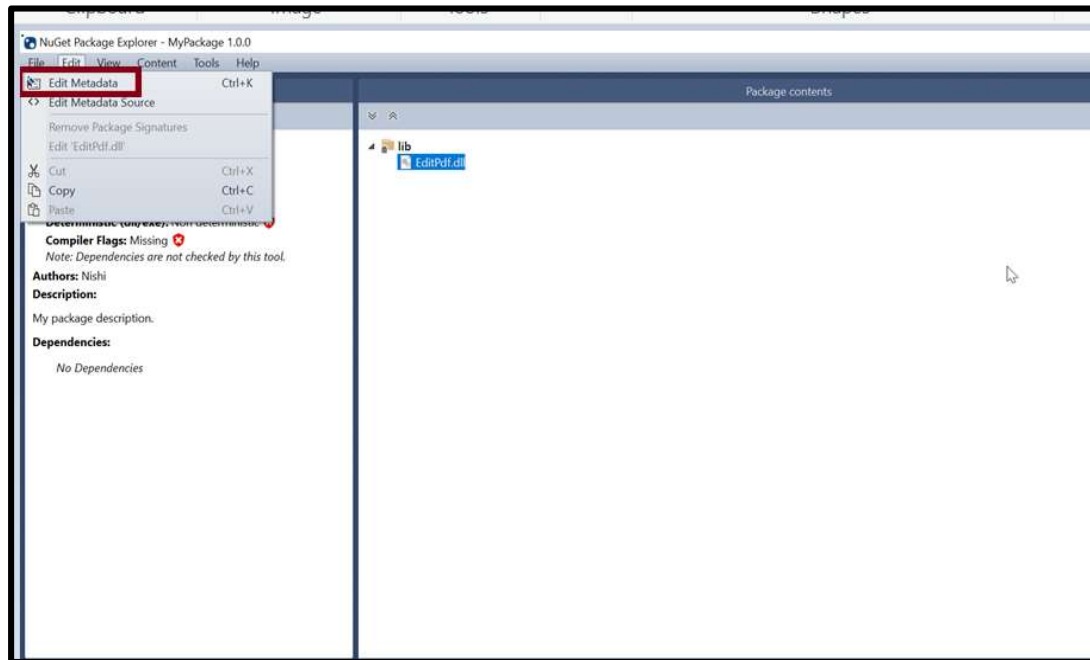
2. Right click on Package content section and select Add Lib Folder.



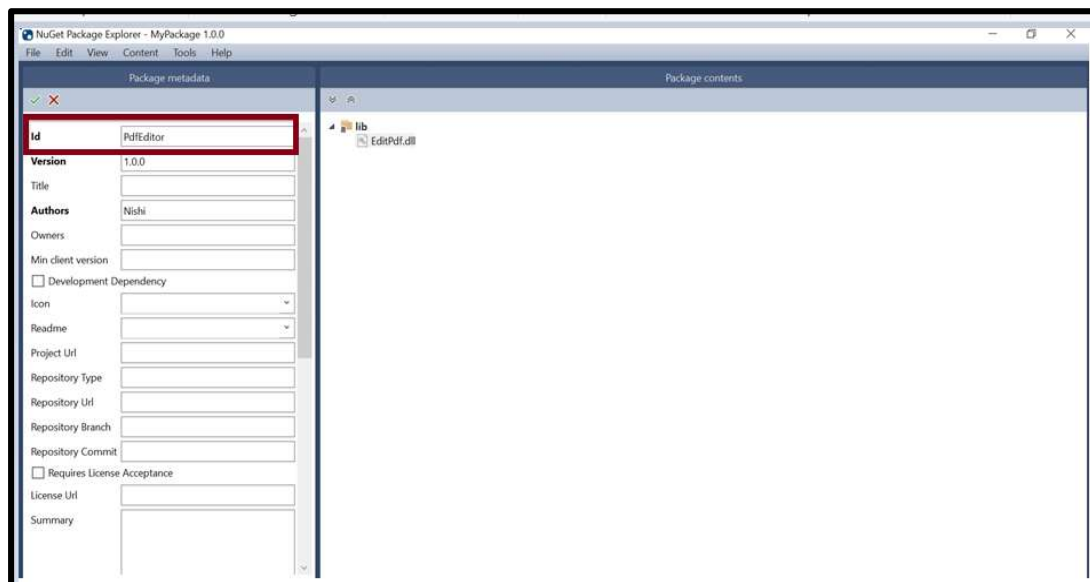
3. Right click on Lib and select Add Existing File. You can find the dll file inside the folder where you have created your Custom activity code. Let's say you have created the code inside ReadPdfWidget folder then you can find the dll inside ReadPdfWidget\ReadPdfWidget\bin\Release\net6.0



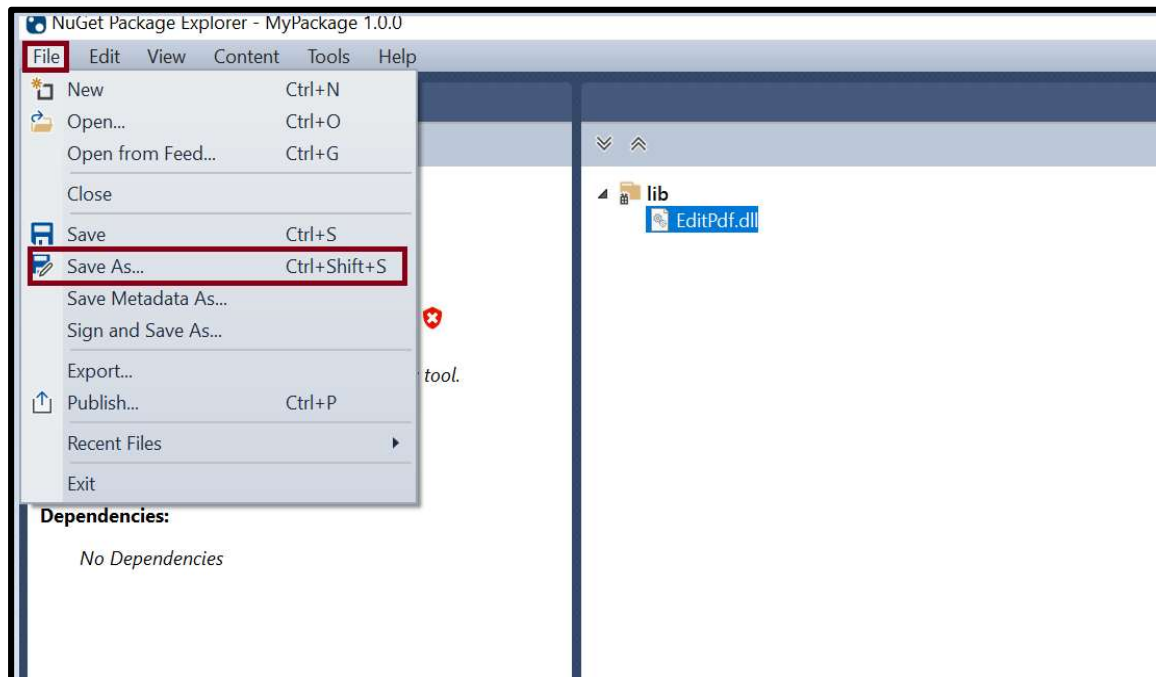
4. Select Edit tab and then click on Edit Metadata.



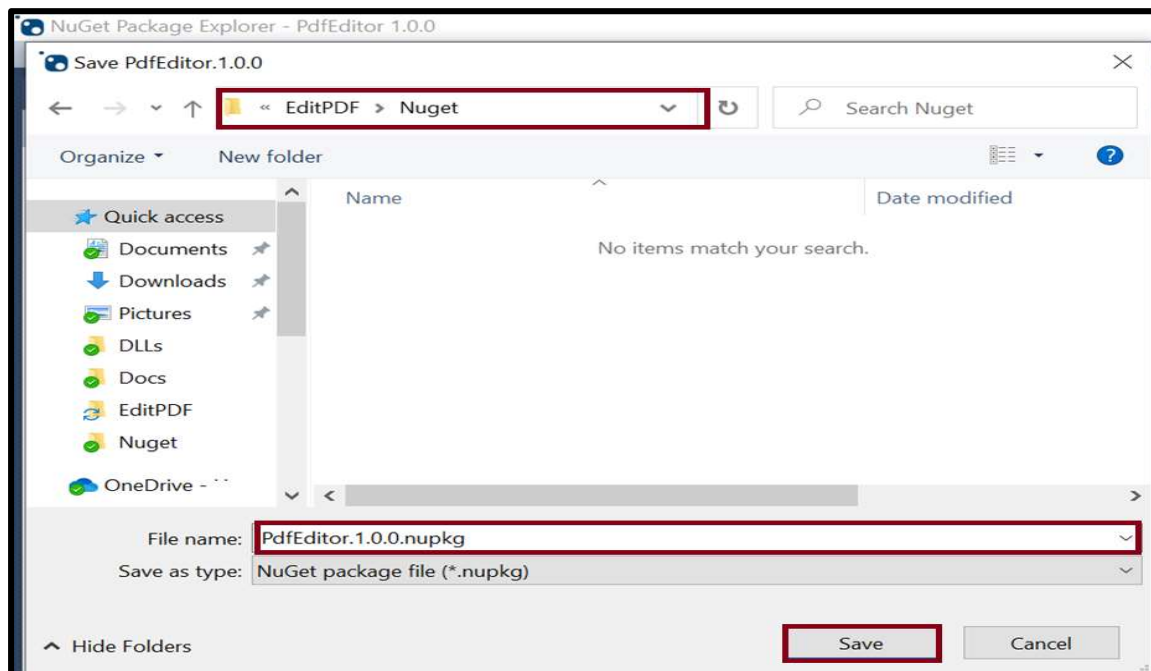
5. Fill in the name you want to give to your Nuget Package in the Id field.



6. Select File tab, then Save As and specify the location where you want to save your Nuget Package.

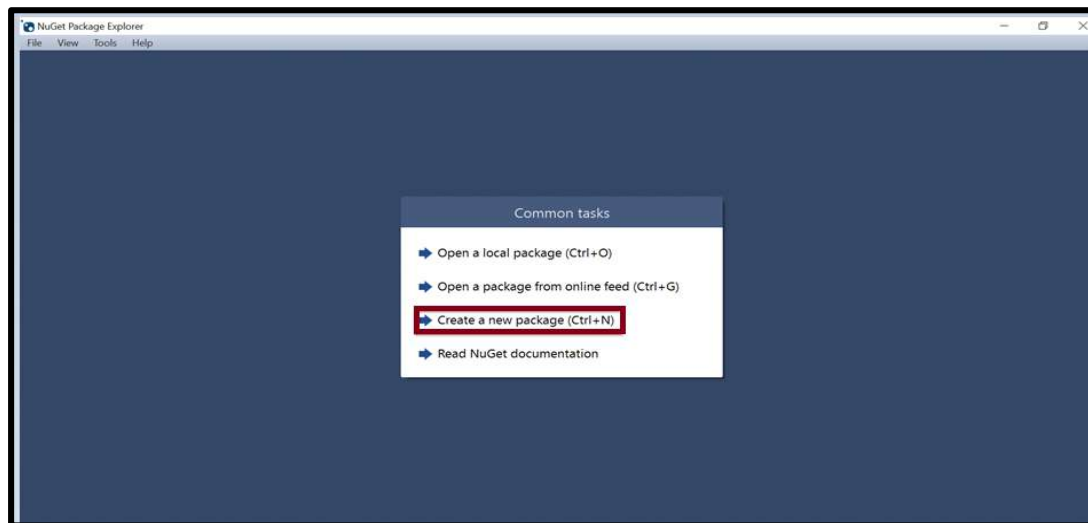


7. Type in the name you want to give to your Nuget Package and click on Save.

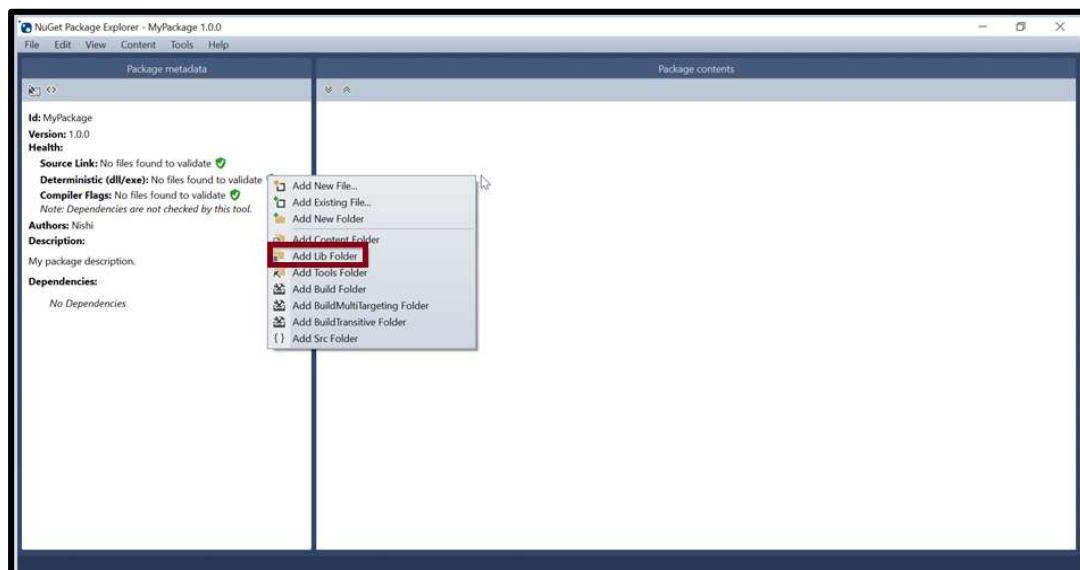


Now the next step is to create NuGet package for the iTextsharp dll file.

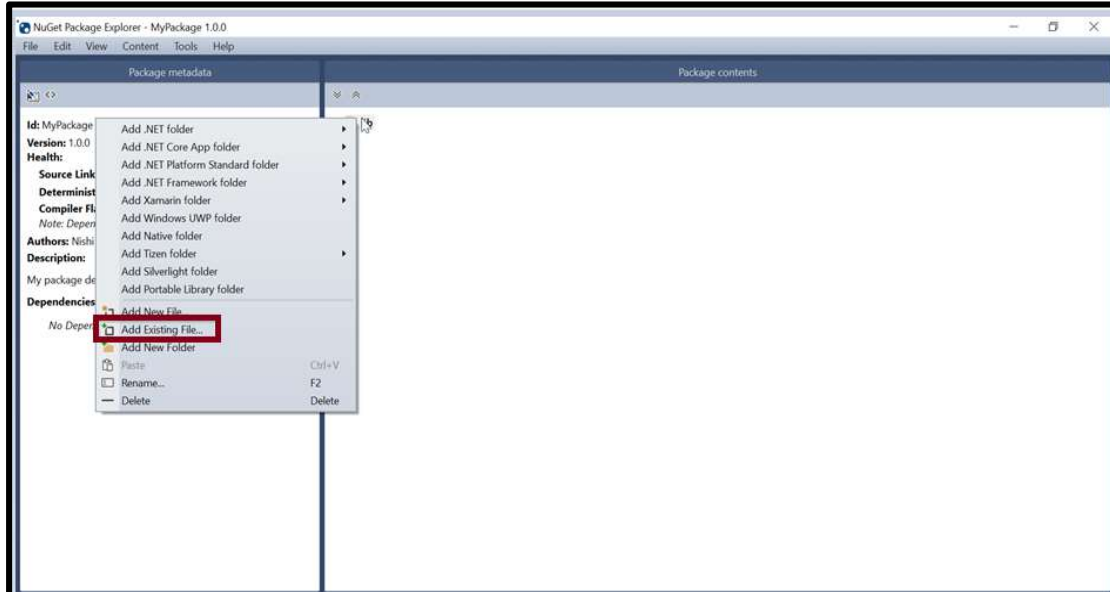
1. Open Nuget package explorer and select Create a new package.



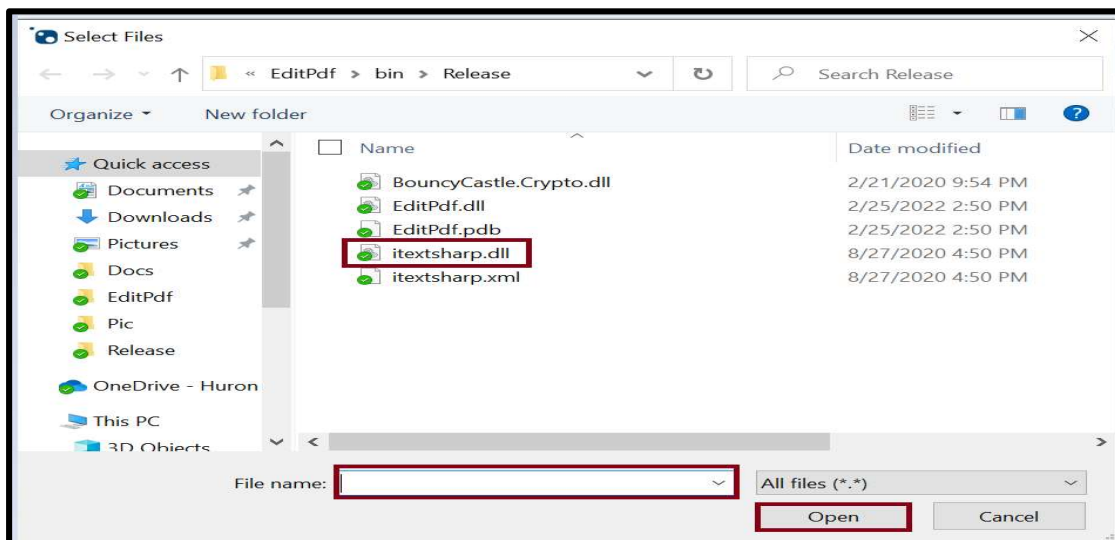
2. Right click on Package Content section and select Add Lib Folder.



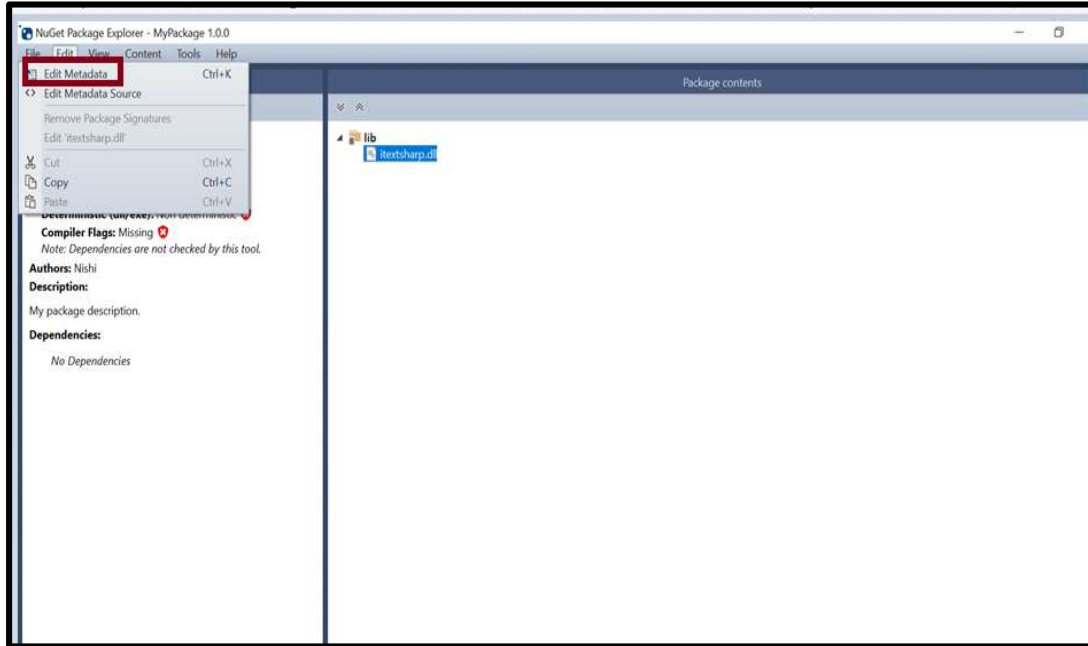
3. Right click on Lib and select Add Existing File.



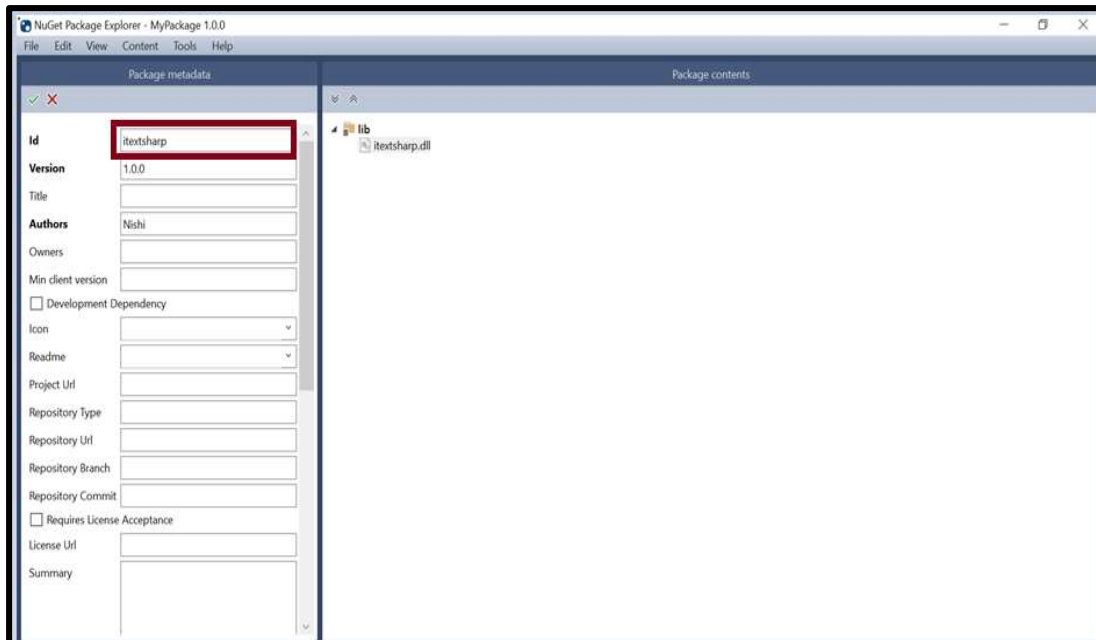
4. Specify the location of your itextsharp dll file. You can find the dll file inside the folder where you have created your Custom activity code. Let's say you have created the code inside ReadPdfWidget folder then you can find the dll inside ReadPdfWidget\ReadPdfWidget\bin\Debug\net6.0



5. Select Edit Tab and then Edit Metadata.

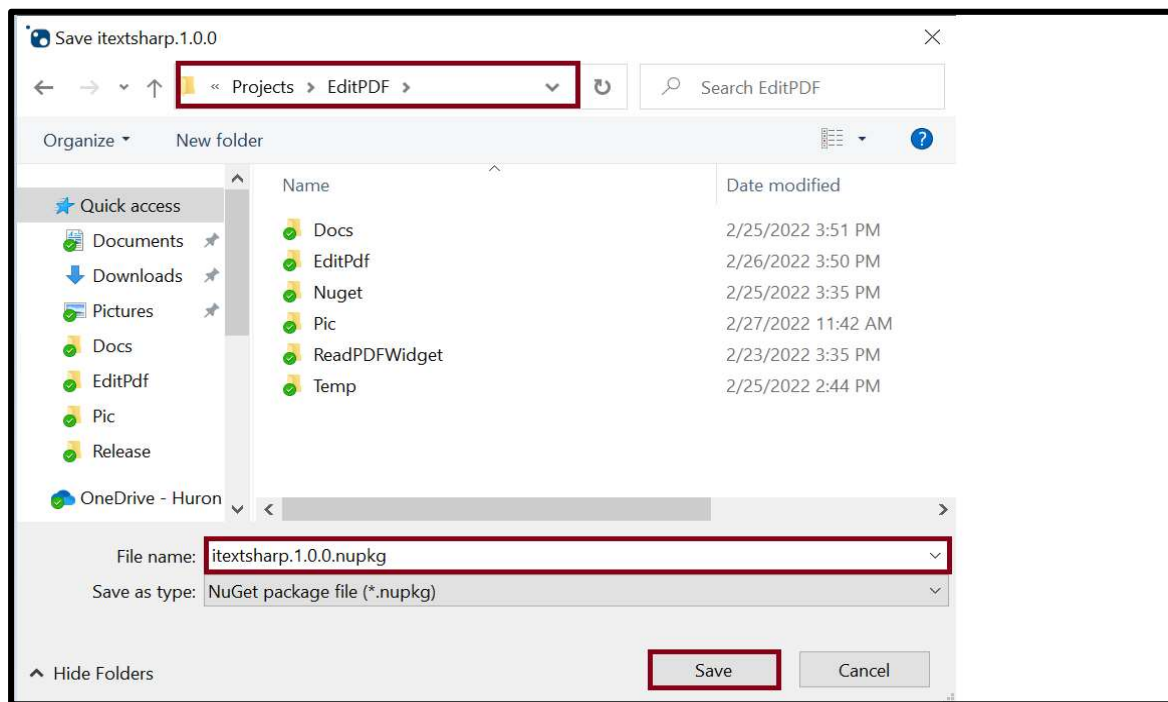


6. Fill in the name you want to give to your NuGet package in the Id field.



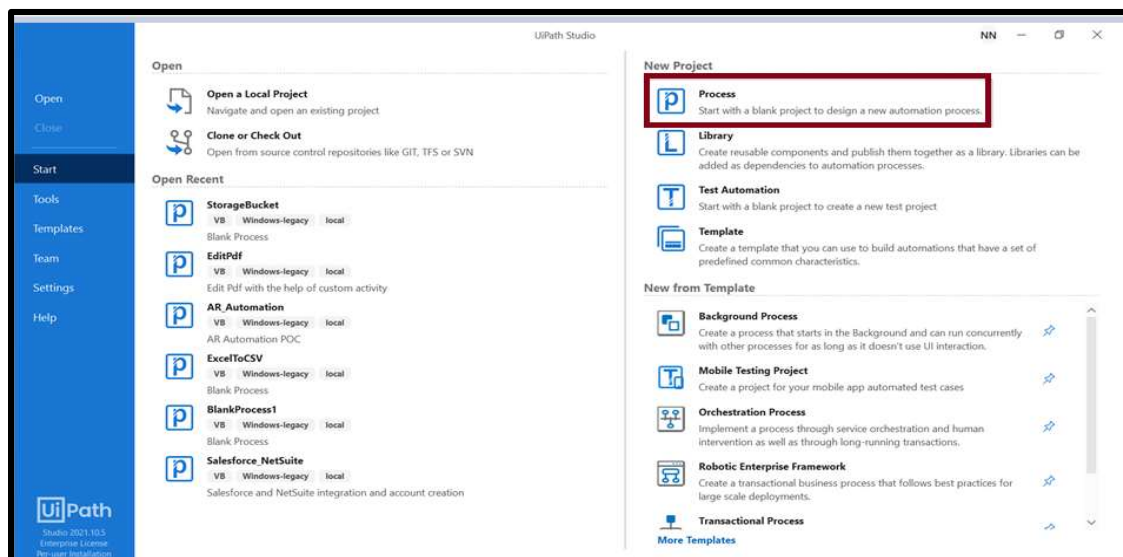


7. Select File tab, then Save As and specify the location where you want to save your NuGet Package.



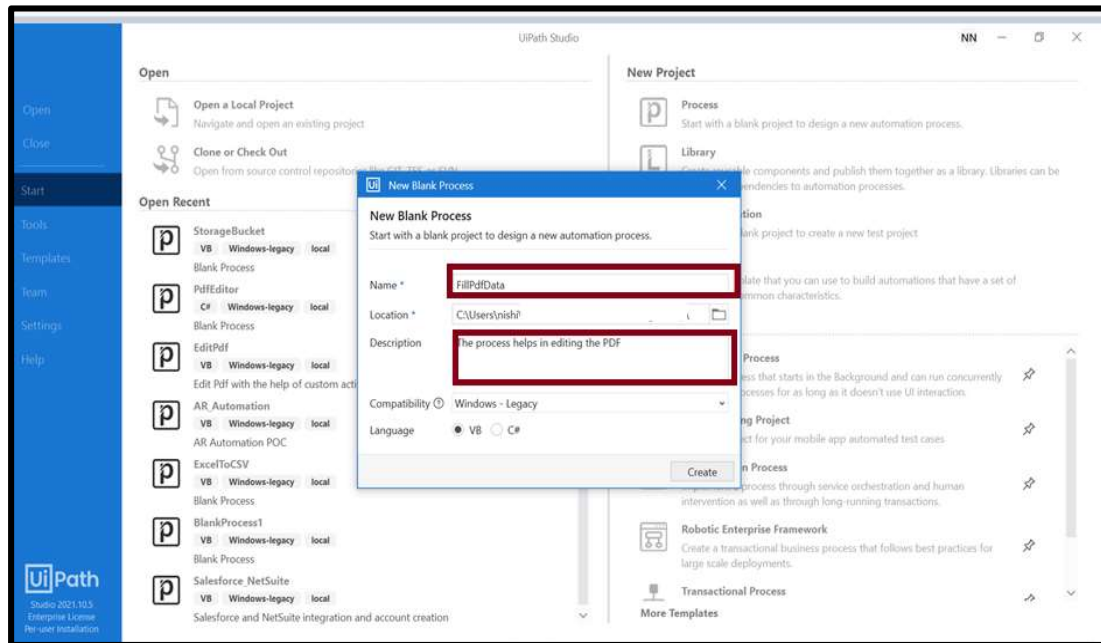
## Configuring NuGet package in UiPath Studio

1. Open UiPath Studio and select Process.



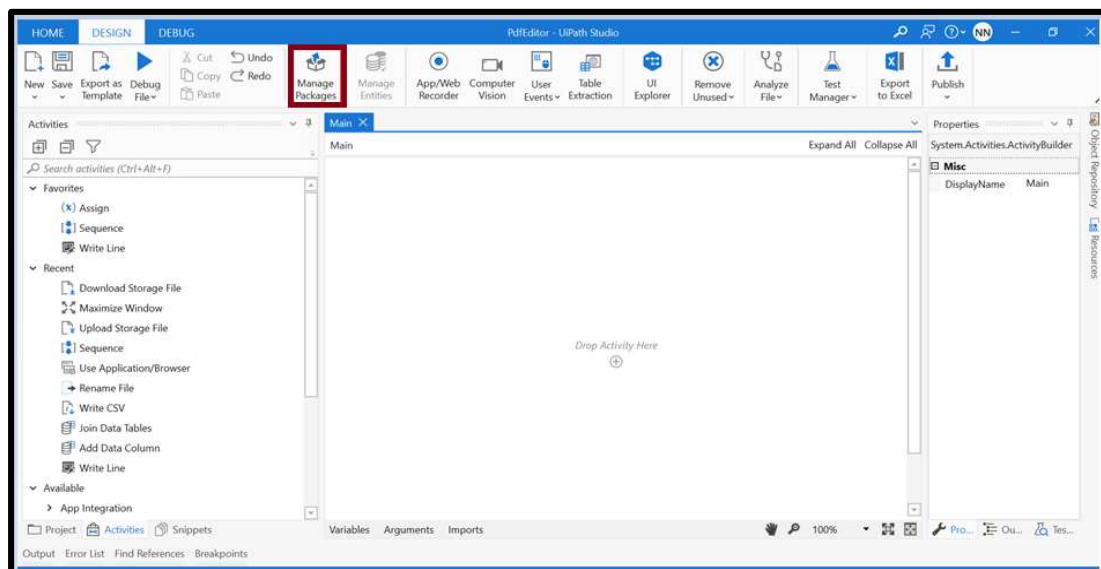
2. Fill in the Process name and Description of your choice.

**Note:** Process name and NuGet Package names should not be the same otherwise it will cause a dependency cycle, which will prevent NuGet Package installation.

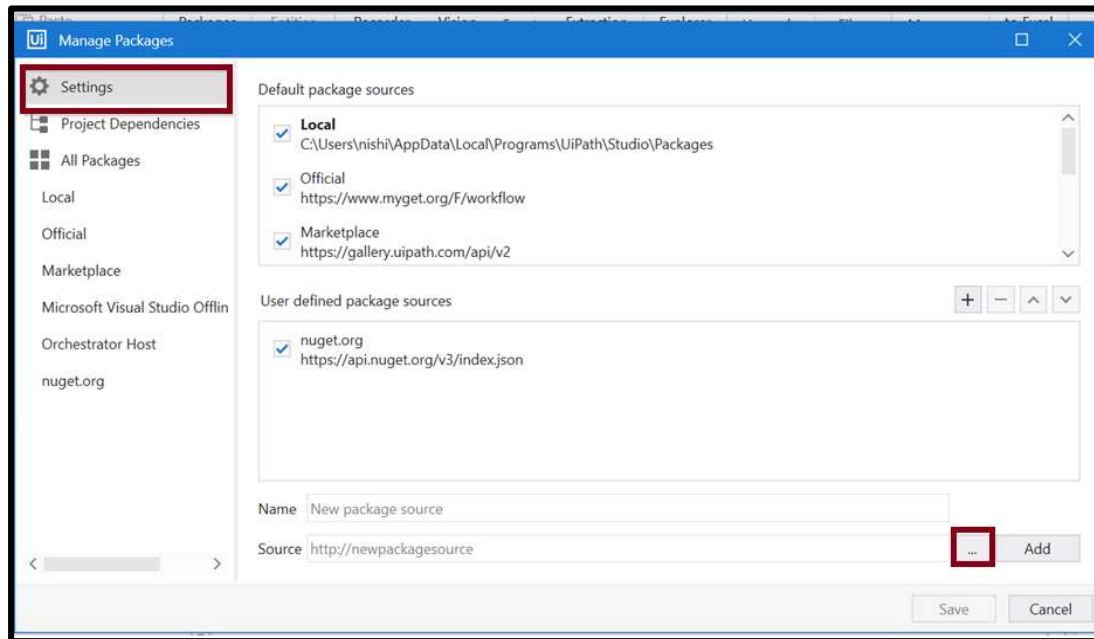


The next step is to install the NuGet package as a dependency for your Project.

3. Click on Manage Packages.

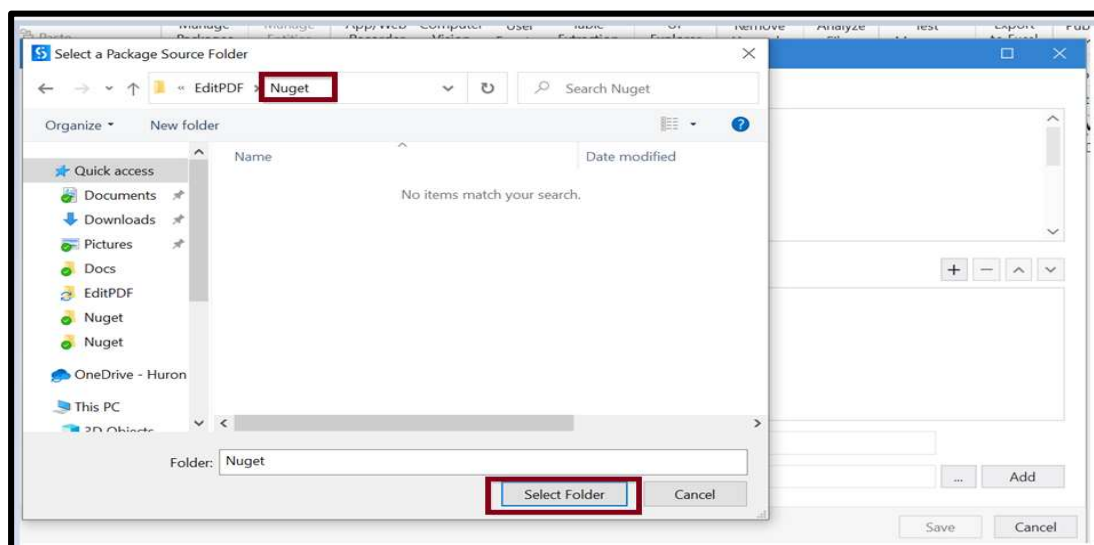


4. Select Settings tab and click on ellipsis icon next to Source.

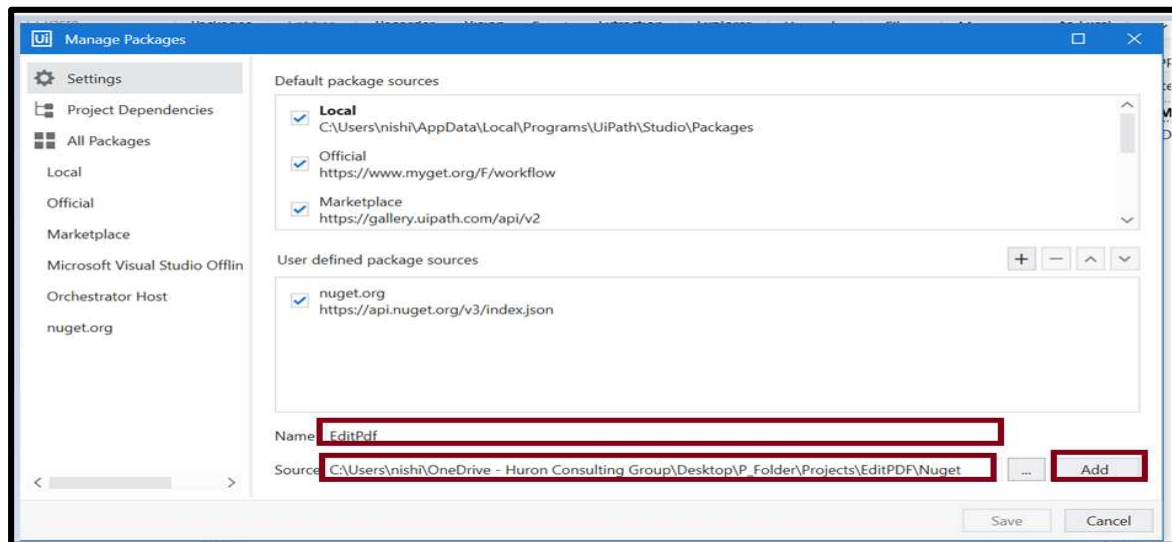


5. Select NuGet Package folder. (The folder where you have saved your itextsharp and PdfEditor NuGet Package)

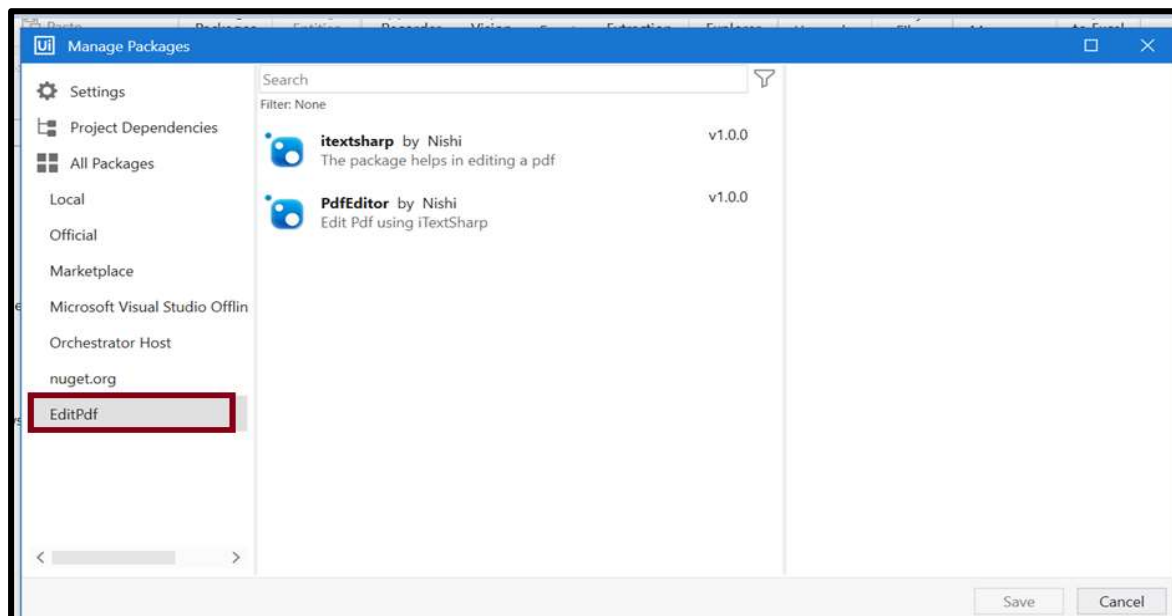
Note: You just need to indicate the folder where you have saved your NuGet Packages. When you select the folder, you won't see the .nupkg files.



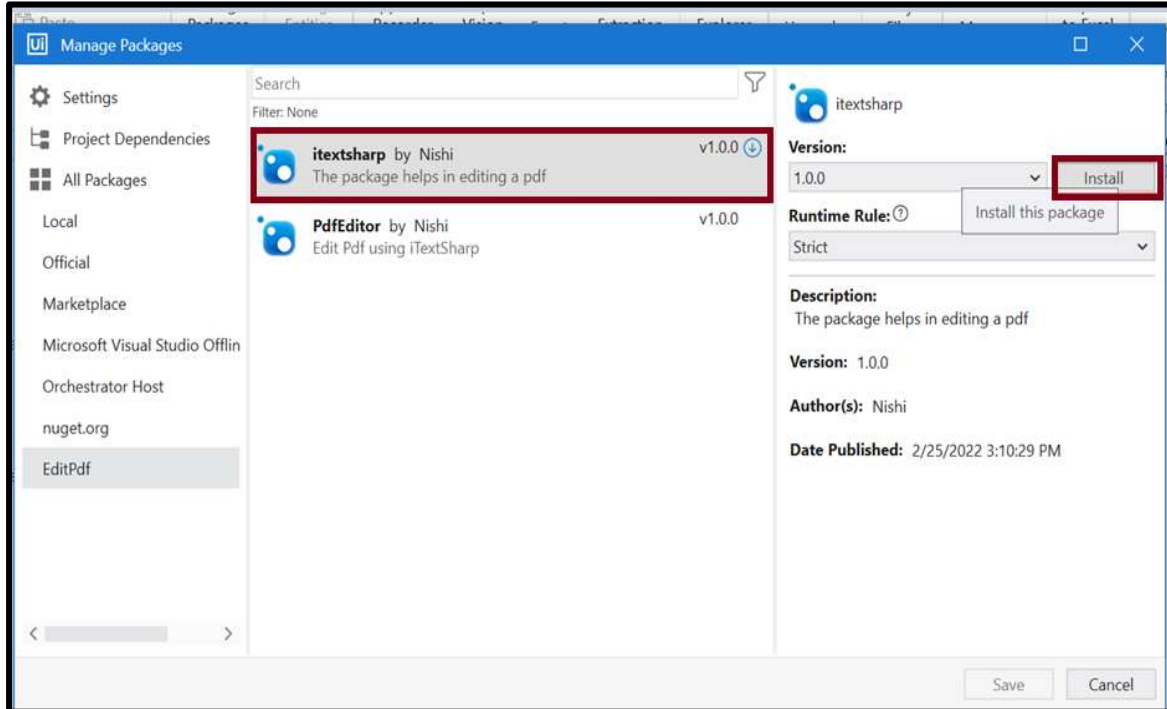
6. Specify the name and click on Add. Source will be the folder location that you have selected in the above step.



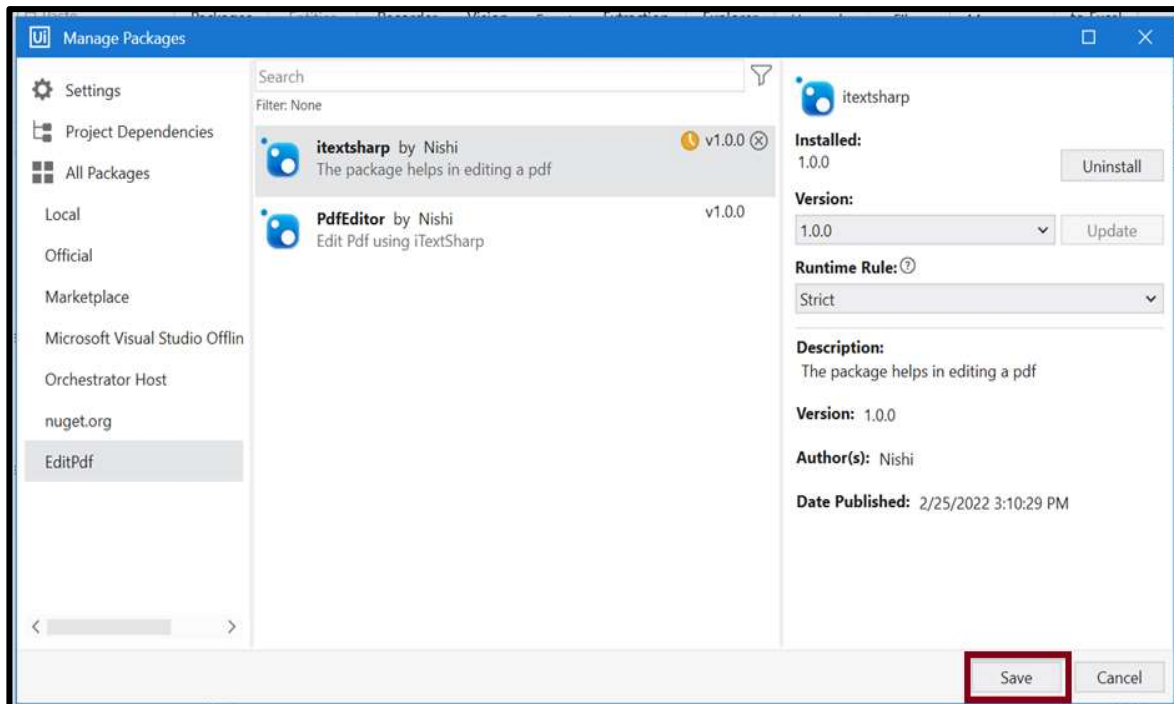
7. Select the newly added NuGet Package folder.



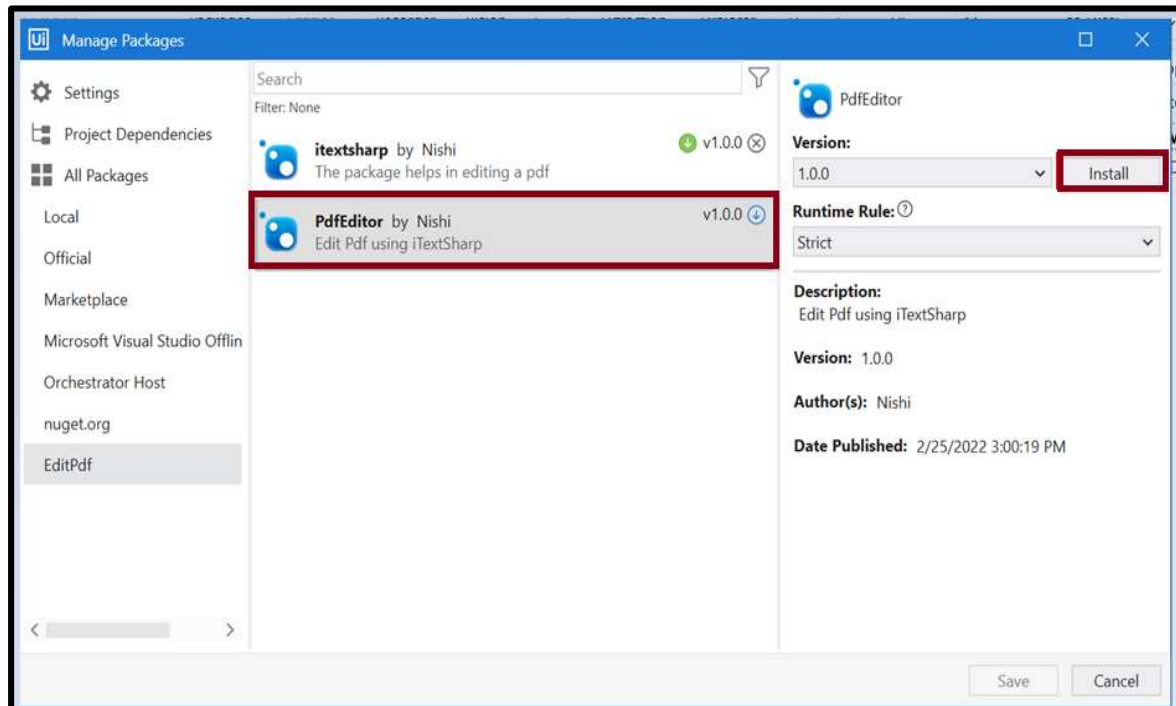
8. Select itextsharp NuGet package and click on Install.



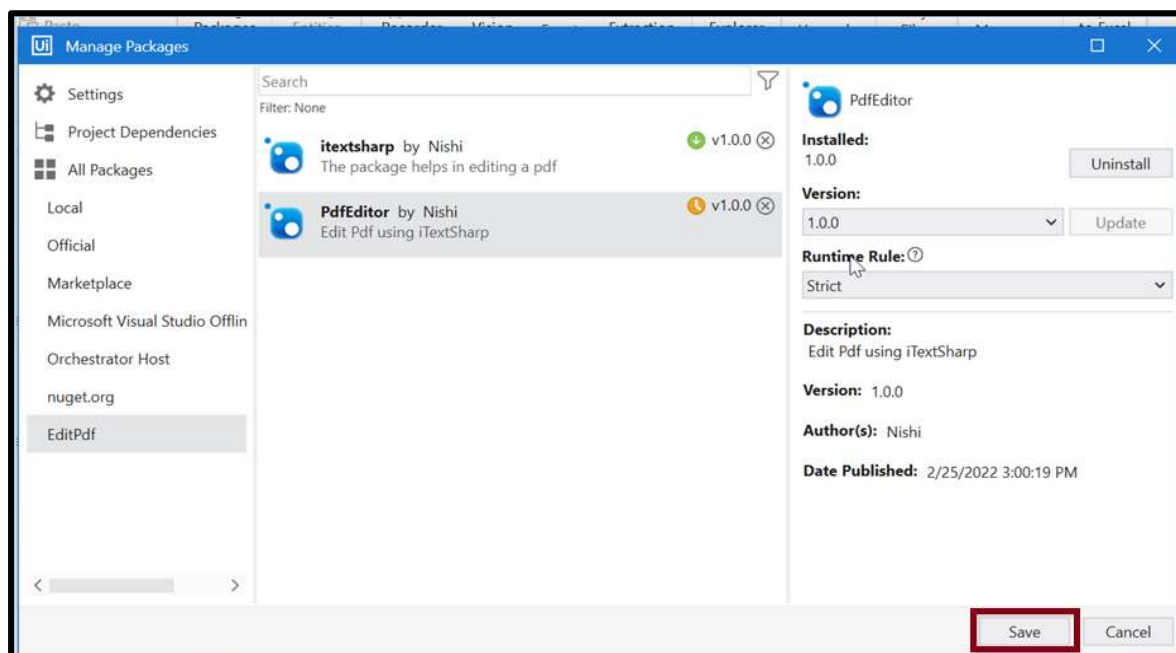
9. Click on Save.



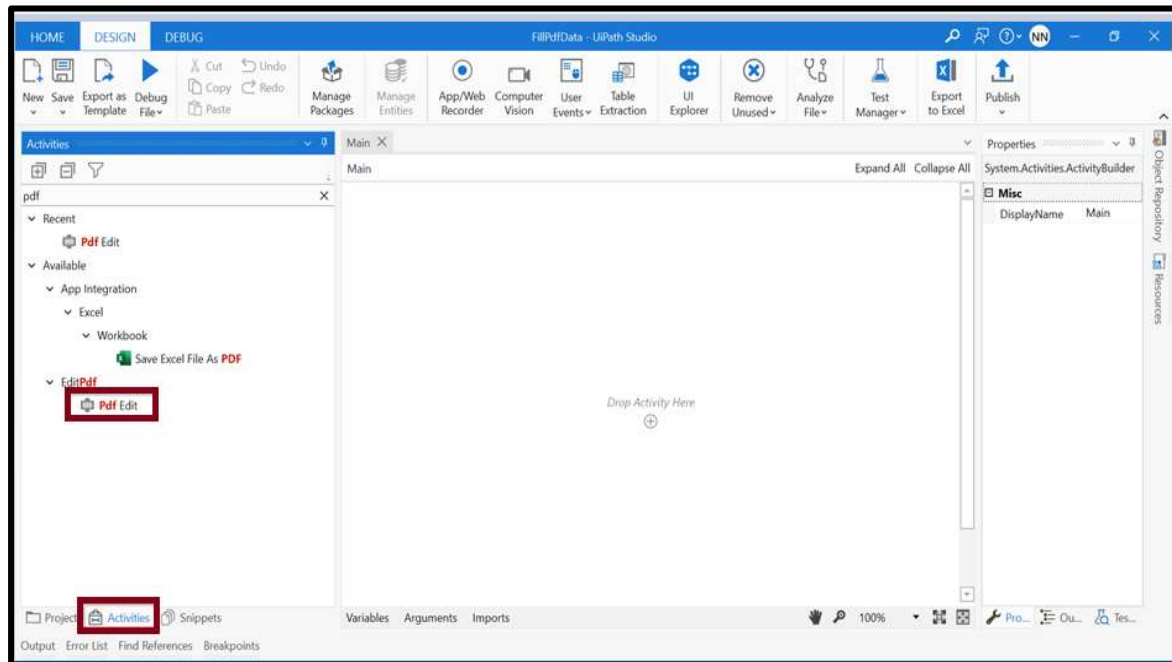
10. Select PdfEditor NuGet Package and click on Install.



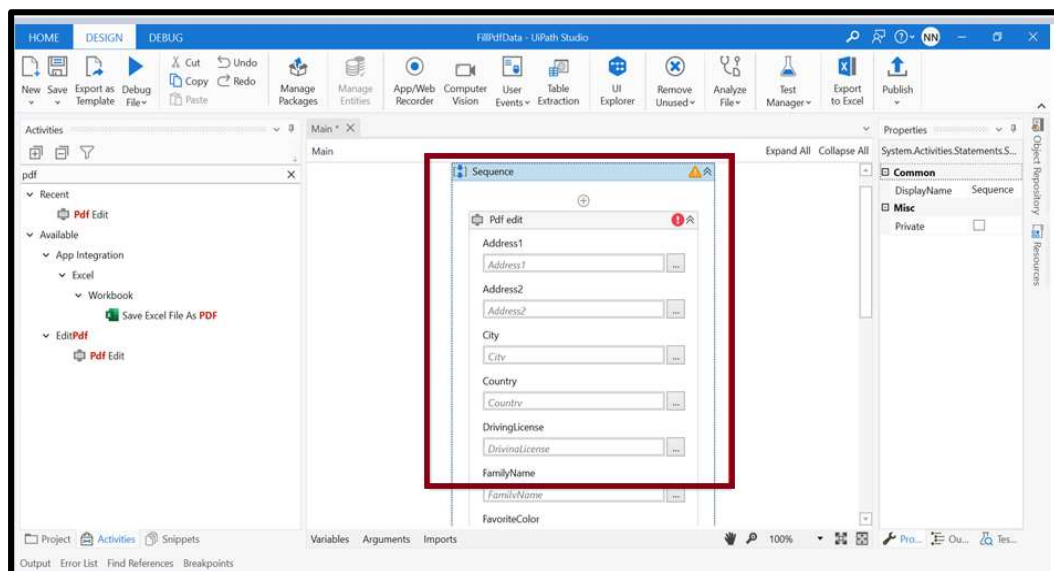
11. Click on Save.



12. Click on the Activities tab in the bottom left corner.

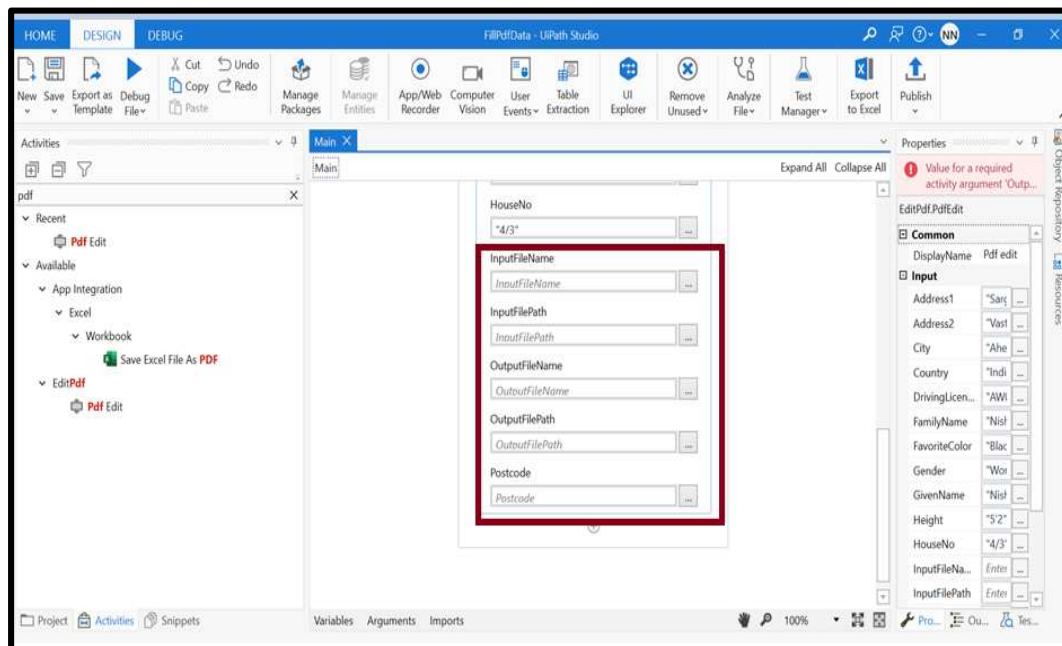


13. Drag and Drop the PdfEdit activity and fill in the values for all the fields.

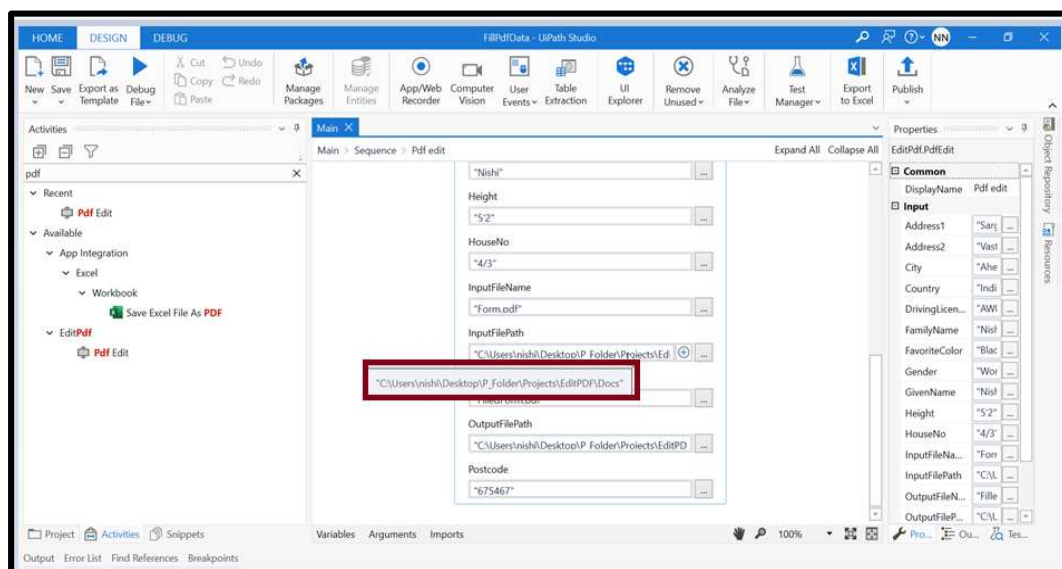




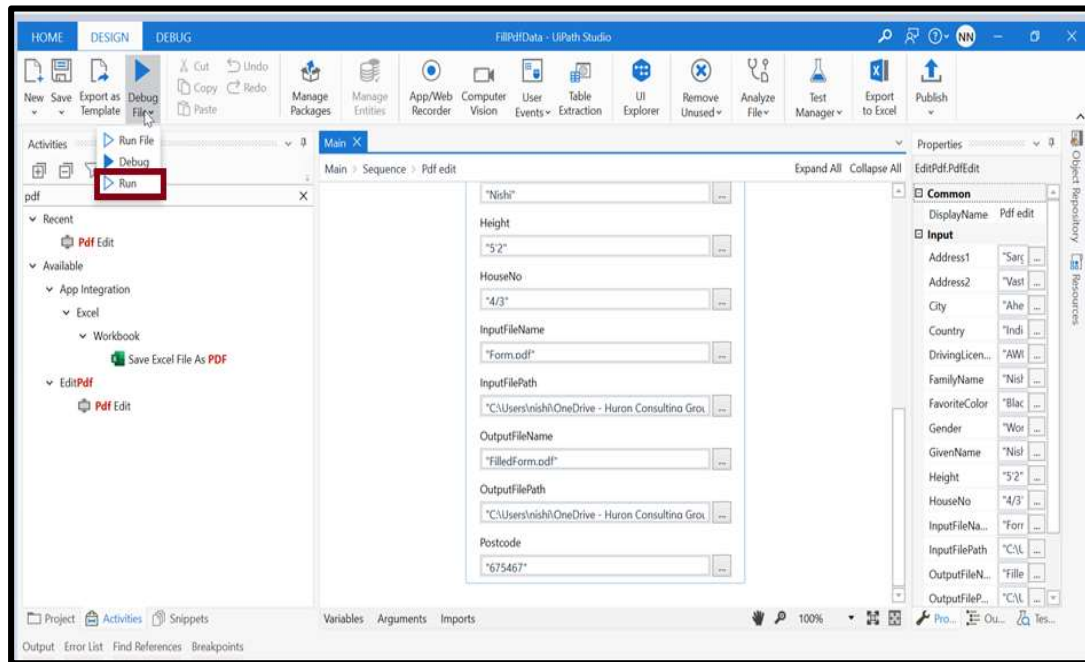
14. Specify input file name, input file path, output file name and output file path. InputFileName is the name of the pdf file which you want to edit. InputFilePath is the folder location where you have saved your pdf file. OutputFileName is the name of the edited pdf file which you will receive as an output after execution of the workflow. OutputFilePath is the location where you want to save your edited pdf.



15. Specify File Paths. An example of how you need to specify the file path.



16. Click on Debug File and then on Run.



The final outcome - In the pdf file, the bot has filled in the data against it's label.

The screenshot shows a PDF form with the following fields filled out:

- Given Name: Nishi
- Family Name: Nishi
- Address 1: Sargram Marg
- House nr: 4/3
- Address 2: Vastrapur
- Postcode: 675467
- City: Ahemdabad
- Country: India
- Gender: Woman
- Height (cm): 5'2
- Driving License: ☐
- I speak and understand (tick all that apply):
  - ☐ Deutsch
  - ☒ English
  - ☐ Français
  - ☐ Esperanto
  - ☐ Latin
- Favourite colour: Black