Lab 14: Working with PDF Files

In this lab, we will be using the following packages:

Just as we discovered the `Dictionary` variable type for email in the preceding lab, Automation Anywhere also has a built-in dictionary for PDF files. You will also learn how to use this dictionary in order to get document properties, such as the *author* and the *filename*. All the files used for the walk-throughs are available in the GitHub repository.

In this lab, we will cover the following topics:

- Extracting text and images
- Splitting and merging documents
- Encrypting and decrypting documents
- Using the PDF dictionary

Technical requirements

In order to install Automation Anywhere Bot agent, the following requirements are necessary:

- Google Chrome
- Completed registration with Automation Anywhere Community Edition
- Successful log-on to Automation Anywhere Community Edition
- A successfully registered local device
- Successfully downloaded sample data from GitHub

Extracting text and images

In this section, we will look at how to extract any text from a PDF file and save it to a text file. The walk-through will also show how a PDF can be saved as an image file.

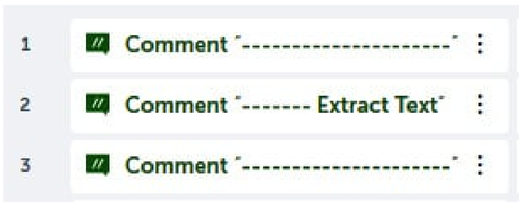
Extracting text from a PDF file

When working with PDF files, we often have to read the text contained within them in order to process the text. A good example would be extracting the text from an invoice in PDF format. This text includes product information, including a description, the quantity, and the costs. As part of a business role, you may then validate the information before posting it to a purchase ledger. In the following walk-through, you will extract the text from the `Chapter14_Letter.pdf` sample PDF file. You may remember this file; it's one of the sample loan letters used in *Lab 12*, *Automation Using Word*. You will begin by adding the comments as usual.

Let's start this walk-through by executing the following steps:

1. Log in to **Control Room**.
2. Create a new bot in the `\Bot\` folder and call it `Chapter14 – PDF Files`.
3. Add a new **Comment** action as `"---------------------"` on line **1**, and click on **Save**.

4. Add a new **Comment** action as `"------- Extract Text"` on line **2**, and click on **Save**.
5. Add a new **Comment** action as `"---------------------"` on line **3**, and click on **Save**. Your initial development interface should look as in the following screenshot:



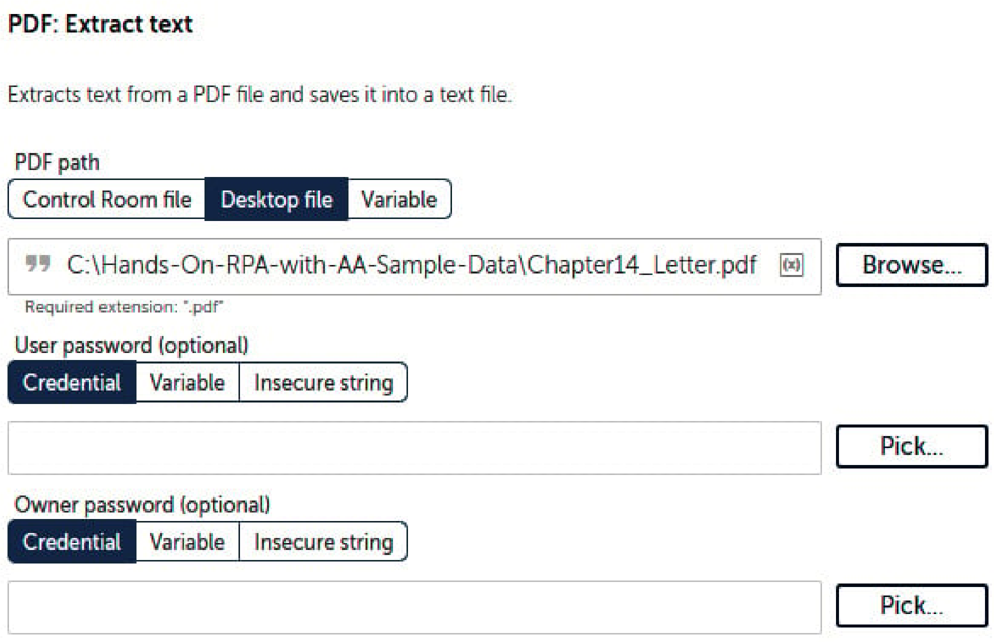
```
1   Comment "---------------------"
2   Comment "------- Extract Text"
3   Comment "---------------------"
```

6. To extract all the text from our PDF file, add the **PDF: Extract text** action just below line **2** so that you can start to set the properties.
7. Firstly, we need to specify the PDF file that will be used. To do this, set the following property for the **PDF: Extract text** action on line **3**:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Letter.pdf`

   As this file is not password-protected, no credentials are needed. If it was, then you would also need to enter the password.

   The property should look as in the following screenshot:



PDF: Extract text

Extracts text from a PDF file and saves it into a text file.

PDF path: Control Room file | [✓ Desktop file] | Variable

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Letter.pdf

Required extension: ".pdf"

User password (optional): [✓ Credential] | Variable | Insecure string

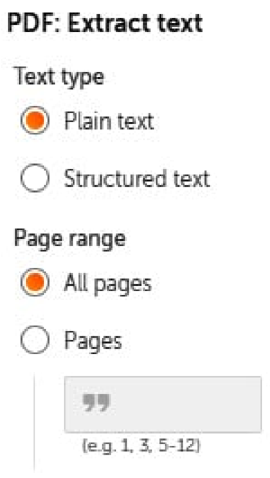
Owner password (optional): [✓ Credential] | Variable | Insecure string

8. Click on **Save**.
9. Continue setting the properties. Next, specify the page range and format of the text required. To do this, set the following properties for the **PDF: Extract text** action on line **3**:

   Text type: **Plain text** (*Structured text would keep the layout -- that is, tabs and spaces*)

Page range: **All pages**

The properties should look as in the following screenshot:


PDF: Extract text

Text type

● Plain text

○ Structured text

Page range

● All pages

○ Pages

(e.g. 1, 3, 5-12)

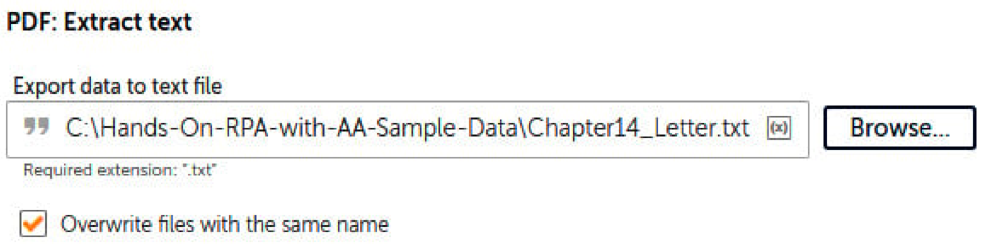
10. Click on **Save**.

11. The final property to set is to specify the output text file. To do this, set the following properties for the **PDF: Extract text** action on line **3**:

    Export data to text file: `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Letter.txt`

    Overwrite files with the same name: *Checked*

    The properties should look as in the following screenshot:


PDF: Extract text

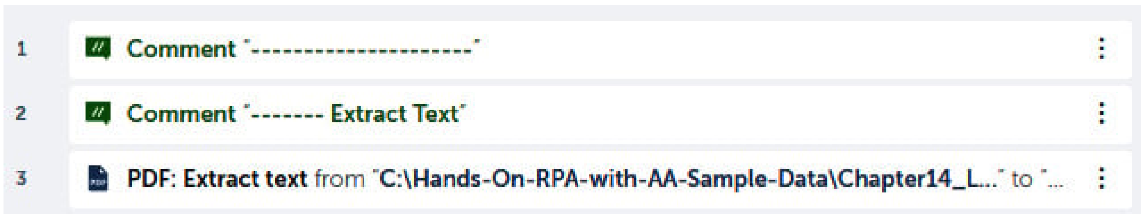
Export data to text file

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Letter.txt

Required extension: ".txt"

✓ Overwrite files with the same name

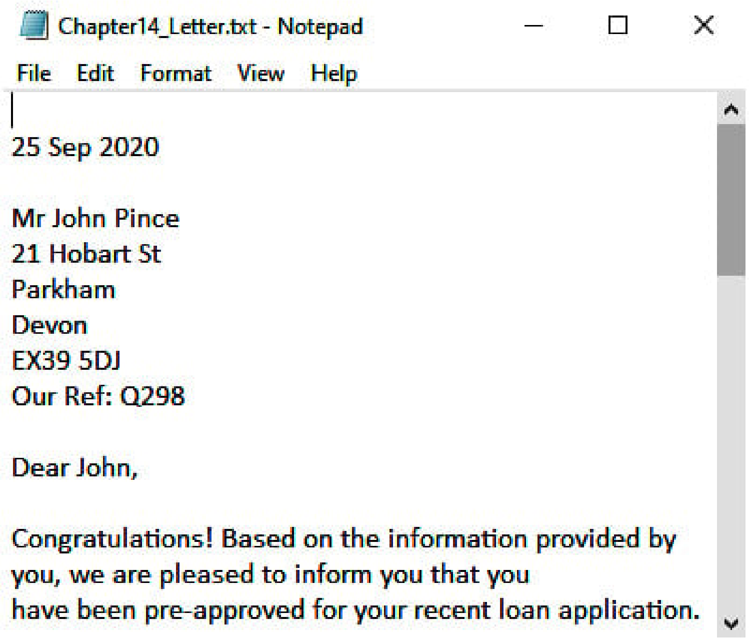
12. Click on **Save**. The development interface for this section should look as in the following screenshot:


1 Comment "---------------------"

2 Comment "------- Extract Text"

3 PDF: Extract text from "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_L..." to "...

That's all there is to it. You can run the bot to test it. Once it has completed processing, a text file called `Chapter14_Letter.txt` will be generated, containing all the text from the PDF file. The output file should look as in the following screenshot:



```
25 Sep 2020

Mr John Pince
21 Hobart St
Parkham
Devon
EX39 5DJ
Our Ref: Q298

Dear John,

Congratulations! Based on the information provided by
you, we are pleased to inform you that you
have been pre-approved for your recent loan application.
```

Now you know how to extract the text from a PDF file. The output file is now ready to start any processing using the string manipulation actions. We will continue with our bot and start to look at how to extract an image from a PDF file.

Extracting an image from a PDF file

In this section, you will learn how to extract an image from a PDF file. This action will export the specific page(s) as an image file. For this example, we will be using the `Chapter14_Chart.pdf` file. The example PDF file consists of a flowchart, which will be exported as a JPEG file. Like always, let's begin by adding our comments:

1. Add a new **Comment** action just below line **3**, `"------- Extract Image"`, and click on **Save**.

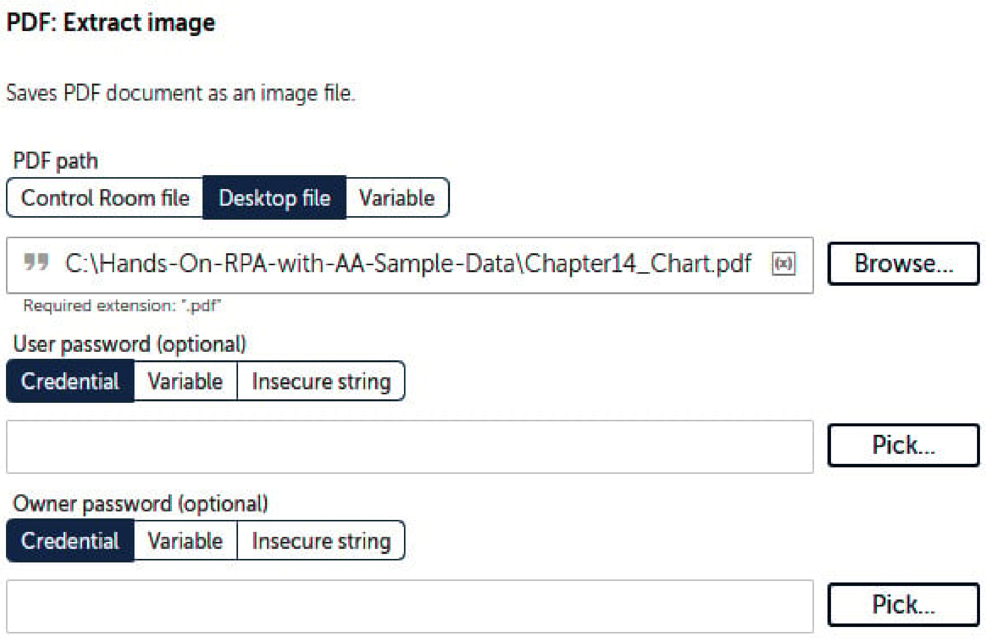
2. To extract the PDF file as an image, add the **PDF: Extract image** action just below line **4** so that you can start to set the properties.

3. Firstly, we need to specify the PDF file that will be used. To do this, set the following property for the **PDF: Extract image** action on line **5**:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Chart.pdf`

   Like before, this file is not password-protected, so no credentials are needed.

   The properties should look as in the following screenshot:


PDF: Extract image

Saves PDF document as an image file.

PDF path

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Chart.pdf

Required extension: ".pdf"

User password (optional)

Owner password (optional)

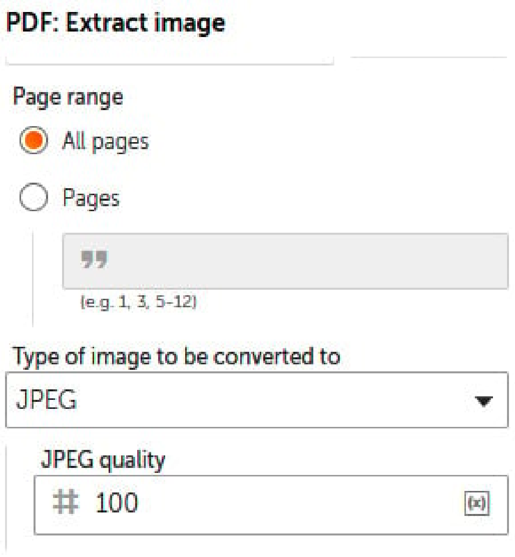
4. Click on **Save**.
5. Continue setting the properties. Next, specify the page range and the format of the image file. To do this, set the following properties for the **PDF: Extract image** action on line **5**:

   Page range: **All pages**

   Type of image to be converted to: **JPEG**

   JPEG quality: `100`

   The properties should look as in the following screenshot:


PDF: Extract image

Page range

(●) All pages

( ) Pages

(e.g. 1, 3, 5-12)

Type of image to be converted to

JPEG

JPEG quality

100

6. Click on **Save**.

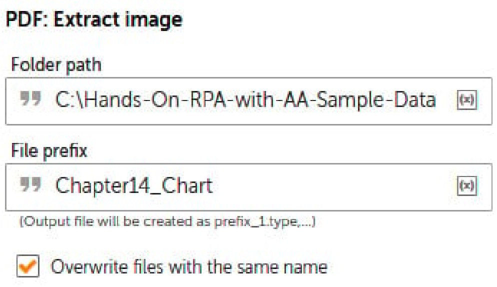
7. The next properties to set are to specify the output folder for the image file. To do this, set the following properties for the **PDF: Extract image** action on line **5**:

   Folder path: `C:\Hands-On-RPA-with-AA-Sample-Data`

   File prefix: `Chapter14_Chart`

   Overwrite files with the same name: *Checked*

   The properties should look as in the following screenshot:



PDF: Extract image

Folder path: C:\Hands-On-RPA-with-AA-Sample-Data

File prefix: Chapter14_Chart

(Output file will be created as prefix_1.type,....)

[✓ Overwrite files with the same name]

8. Click on **Save**.

9. Finally, we need to specify the image resolution and the color for the output file. To do this, set the following properties for the **PDF: Extract image** action on line **5**:

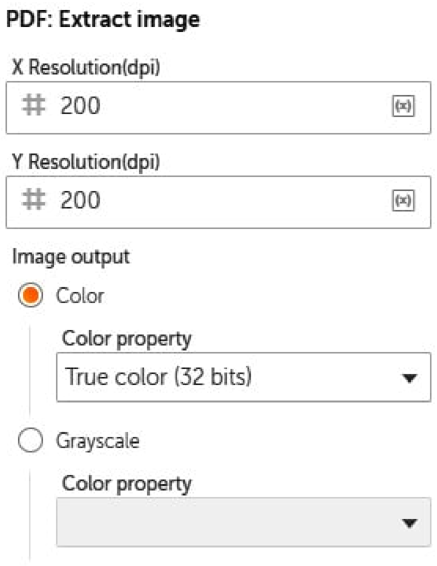
   X Resolution(dpi): `200`

   Y Resolution(dpi): `200`

   Image output: **Color**

   Color property: **True color (32 bits)**

   The properties should look as in the following screenshot:



PDF: Extract image

X Resolution(dpi): 200

Y Resolution(dpi): 200

Image output

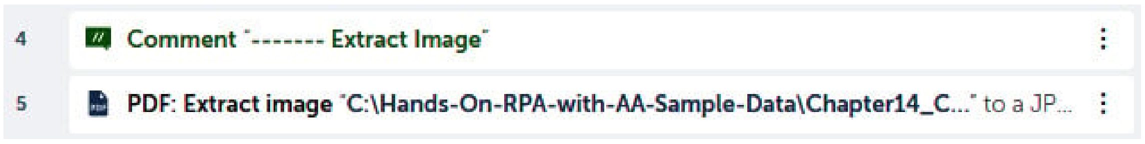
[✓ Color]

Color property: True color (32 bits)

Grayscale

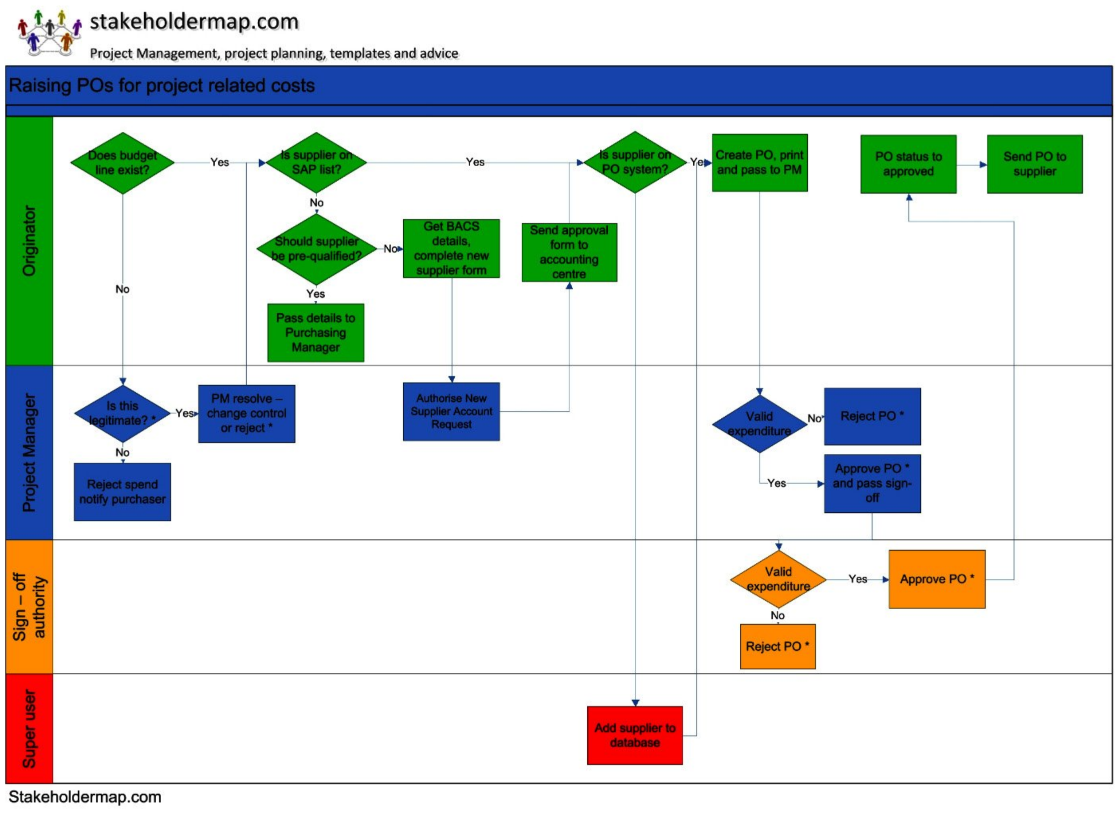
Color property:

10. Click on **Save**. The development interface for this section should look as in the following screenshot:



```
4   Comment "------- Extract Image"
5   PDF: Extract image "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_C..." to a JP...
```

The extraction of an image is complete. Again, you can run the bot. When it's finished processing, you will have an output image file called `Chapter14_Chart_1.jpeg`. This file consists of the contents from the original PDF file. The output file should look as in the following screenshot:


stakeholdermap.com
Project Management, project planning, templates and advice
Raising POs for project related costs
Originator
Project Manager
Sign – off authority
Super user
Does budget line exist?
Yes
No
Is supplier on SAP list?
Should supplier be pre-qualified?
Pass details to Purchasing Manager
Get BACS details, complete new supplier form
Send approval form to accounting centre
Is supplier on PO system?
Create PO, print and pass to PM
PO status to approved
Send PO to supplier
Is this legitimate? *
PM resolve – change control or reject *
Reject spend notify purchaser
Authorise New Supplier Account Request
Valid expenditure
Reject PO *
Approve PO * and pass sign-off
Approve PO *
Add supplier to database
Stakeholdermap.com

This walk-through has taught you how to extract an image from a PDF file. You have learned that the format can be modified, including the resolution and the file format. In the next section, you will learn how to split and merge PDF documents.

Splitting and merging documents

In this section, you will learn how to manipulate PDF files by means of splitting an existing file into multiple files and merging multiple files into a single PDF document. The walk-through will use the `Chapter14_Games.pdf` file, which is part of the GitHub repository.

Splitting a PDF file

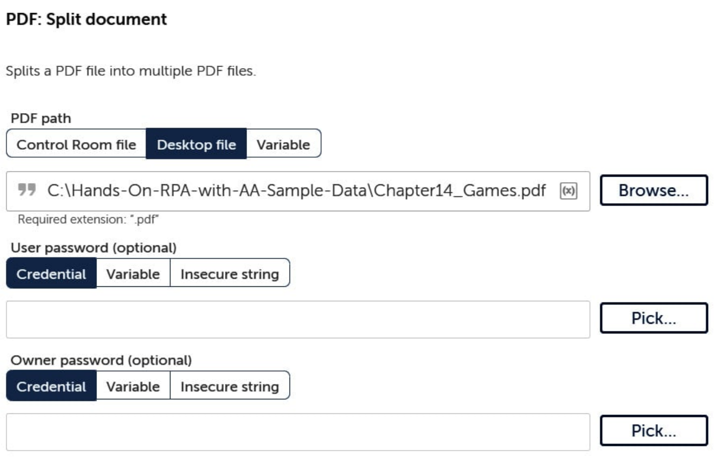
The `Chapter14_Games.pdf` sample file that we will use is an eight-page document summarizing the contents of a book about retro arcade games. For this walk-through, the bot is tasked with splitting this document into eight separate PDF files, each file consisting of one page. Like always, let's begin by adding our comments:

1. Add a new **Comment** action just below line **5**, `"------- Split File"`, and click on **Save**.
2. To split the PDF file, add the **PDF: Split document** action just below line **6** so that you can start to set the properties.
3. Firstly, we need to specify the PDF file that will be used. To do this, set the following property for the **PDF: Split document** action on line **7**:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Games.pdf`

   Like before, this file is not password-protected, so no credentials are needed.

   The property should look as in the following screenshot:



PDF: Split document

Splits a PDF file into multiple PDF files.

PDF path
Control Room file | Desktop file | Variable

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Games.pdf
Browse...
Required extension: ".pdf"

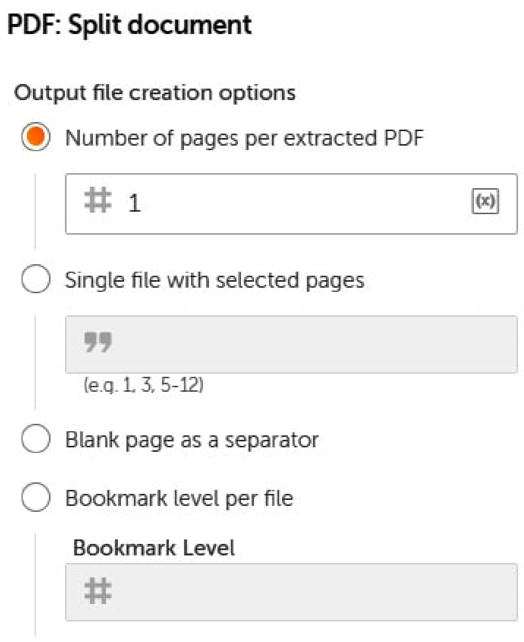
User password (optional)
Credential | Variable | Insecure string
Pick...

Owner password (optional)
Credential | Variable | Insecure string
Pick...

4. Click on **Save**.
5. Continue setting the properties. Next, we need to specify how the document is to be split. A number of options are available. In this case, we want to split it at each page. To do this, set the following property for the **PDF: Split document** action on line **7**:

   Output file creation options: **Number of pages per extracted PDF** -- `1`

   The property should look as in the following screenshot:


PDF: Split document

Output file creation options

● Number of pages per extracted PDF

1

○ Single file with selected pages

(e.g. 1, 3, 5-12)

○ Blank page as a separator

○ Bookmark level per file

Bookmark Level

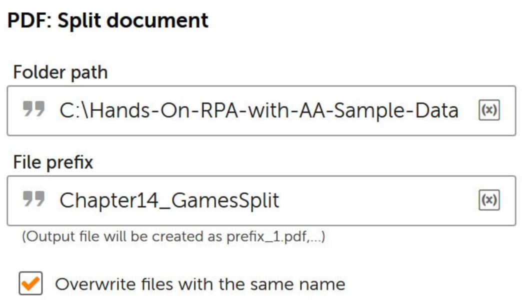
6. Click on **Save**.
7. The final properties to set are to specify the output folder and the filename prefix. To do this, set the following properties for the **PDF: Split document** action on line **7**:

   Folder path: `C:\Hands-On-RPA-with-AA-Sample-Data`

   File prefix: `Chapter14_GamesSplit`

   Overwrite files with the same name: *Checked*

   The properties should look as in the following screenshot:


PDF: Split document

Folder path

C:\Hands-On-RPA-with-AA-Sample-Data

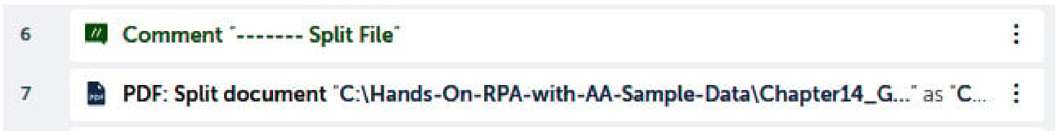
File prefix

Chapter14_GamesSplit

(Output file will be created as prefix_1.pdf,...)

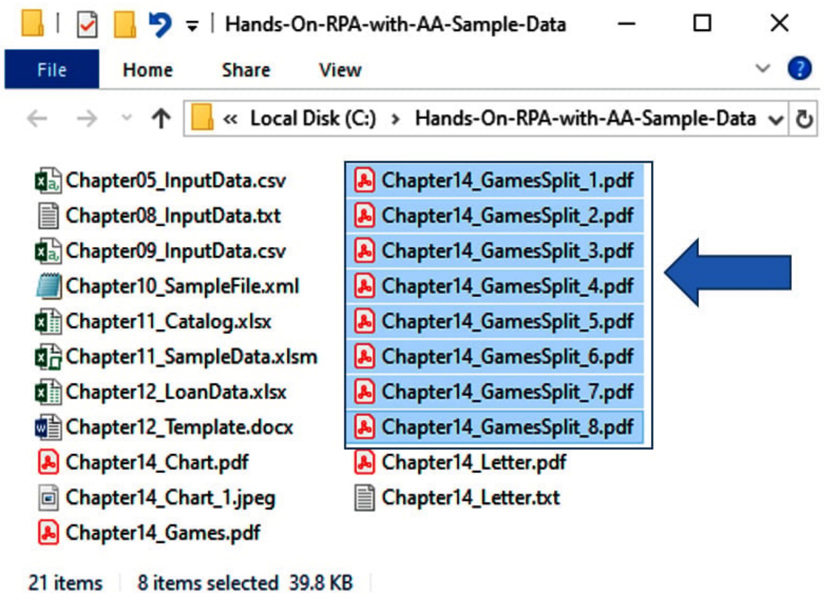
✓ Overwrite files with the same name

8. Click on **Save**. The development interface for this section should look as in the following screenshot:


6 Comment "------- Split File"

7 PDF: Split document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G..." as "C...

Right! You can go ahead and run your bot now. That was pretty straightforward, wasn't it? The original PDF file should be split into eight individual PDF documents, each with an increment counter suffix. All the newly created PDF files should be visible in the **File Explorer**:


Hands-On-RPA-with-AA-Sample-Data
File
Home
Share
View
« Local Disk (C:) › Hands-On-RPA-with-AA-Sample-Data

Chapter05_InputData.csv
Chapter08_InputData.txt
Chapter09_InputData.csv
Chapter10_SampleFile.xml
Chapter11_Catalog.xlsx
Chapter11_SampleData.xlsm
Chapter12_LoanData.xlsx
Chapter12_Template.docx
Chapter14_Chart.pdf
Chapter14_Chart_1.jpeg
Chapter14_Games.pdf
Chapter14_GamesSplit_1.pdf
Chapter14_GamesSplit_2.pdf
Chapter14_GamesSplit_3.pdf
Chapter14_GamesSplit_4.pdf
Chapter14_GamesSplit_5.pdf
Chapter14_GamesSplit_6.pdf
Chapter14_GamesSplit_7.pdf
Chapter14_GamesSplit_8.pdf
Chapter14_Letter.pdf
Chapter14_Letter.txt

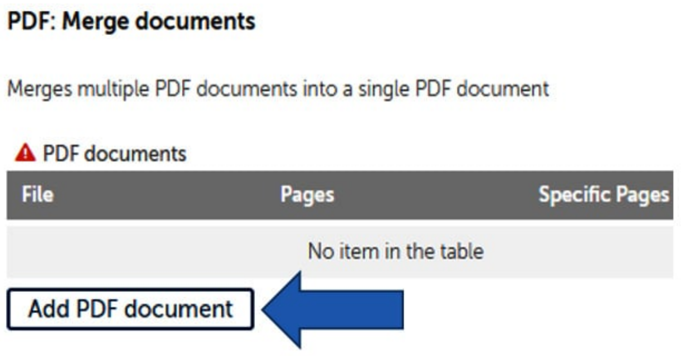
21 items   8 items selected 39.8 KB

Awesome work! You have the skills to split a PDF document now. This can be a very useful action when automating tasks while working with PDF files. We will continue manipulating documents; in the next section, you will learn how to merge multiple PDF files into a single document.

Merging multiple PDF files

In this section, we will look at how to merge multiple files. It's a good job that we have just learned how to split a file, as now we have eight individual files to work with. For this walk-through, you will configure your bot to merge all eight `Chapter14_GamesSplit` files into a single PDF file. Like always, let's begin by adding our comments:

1. Add a new **Comment** action just below line **7**, `"------- Merge Files"`, and click on **Save**.
2. To merge multiple PDF files, add the **PDF: Merge documents** action just below line **8**, so you can start to set the properties.
3. We need to specify the individual PDF files that we want merging together. To do this, click on the **Add PDF document** button from the properties of the **PDF: Merge documents** action on line **9**:


PDF: Merge documents

Merges multiple PDF documents into a single PDF document

PDF documents

File	Pages	Specific Pages
No item in the table		

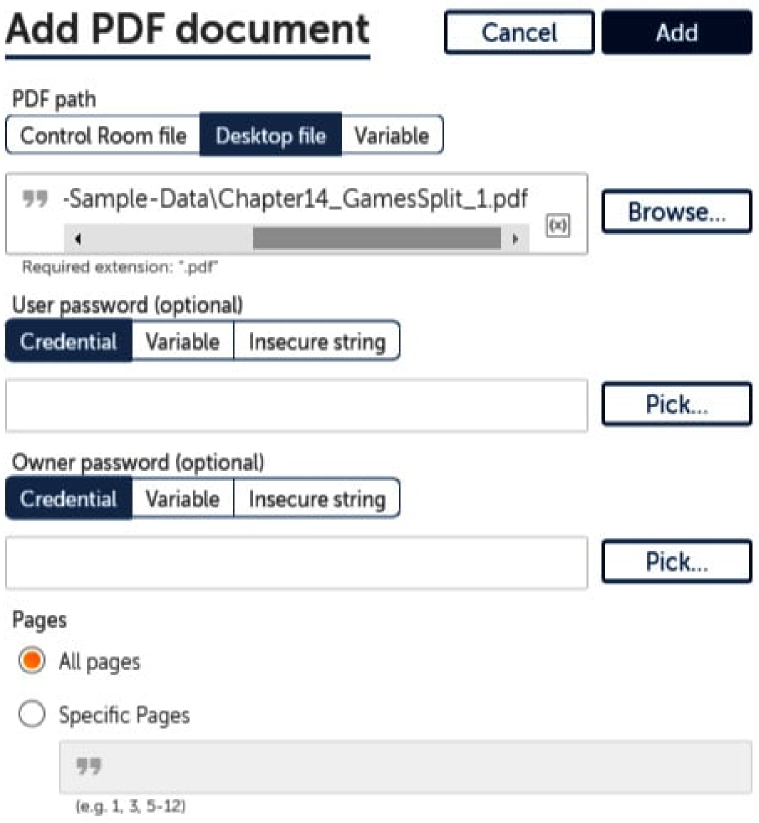
4. The **Add PDF document** dialog box will appear. Here, you can specify the first document for merging. To do this, set the following properties in the **Add PDF document** dialog box:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_1.pdf`

   Pages: **All pages**

   Like before, this file is not password protected, so no credentials are needed.

   The properties should look as in the following screenshot:


Add PDF document

PDF path: Control Room file | [✓ Desktop file] | Variable

-Sample-Data\Chapter14_GamesSplit_1.pdf

Required extension: ".pdf"

User password (optional): [✓ Credential] | Variable | Insecure string

Owner password (optional): [✓ Credential] | Variable | Insecure string

Pages

[✓ All pages]

Specific Pages

(e.g. 1, 3, 5-12)

5. Click on **Add**.

6. Repeat *steps 3* to *5* for each of the following seven documents:

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_2.pdf`

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_3.pdf`

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_4.pdf`

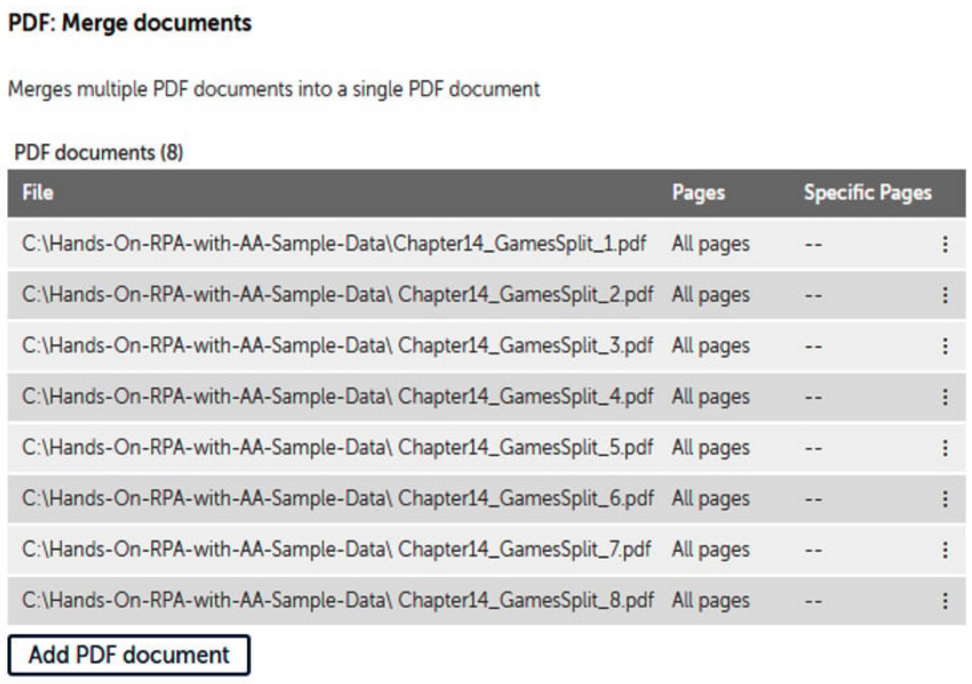
   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_5.pdf`

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_6.pdf`

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_7.pdf`

   `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_8.pdf`

7. Click on **Save**. The **PDF: Merge documents** properties should look as in the following screenshot:



PDF: Merge documents

Merges multiple PDF documents into a single PDF document

PDF documents (8)

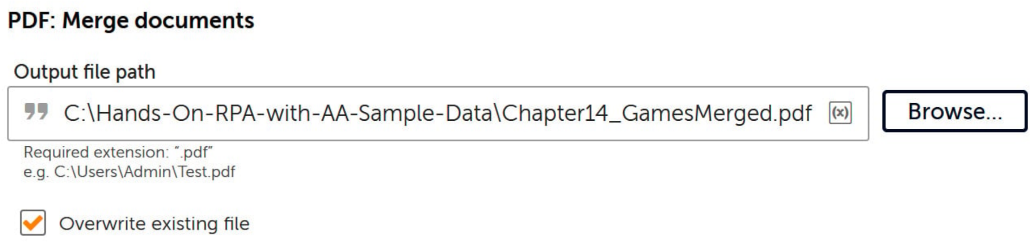
File	Pages	Specific Pages
C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesSplit_1.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_2.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_3.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_4.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_5.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_6.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_7.pdf	All pages	--
C:\Hands-On-RPA-with-AA-Sample-Data\ Chapter14_GamesSplit_8.pdf	All pages	--

8. The final properties to set are to specify the single output file. To do this, set the following properties for the **PDF: Merge documents** action on line **9**:

   Output file path: `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesMerged.pdf`

   Overwrite existing file: *Checked*

   The properties should look as in the following screenshot:


PDF: Merge documents

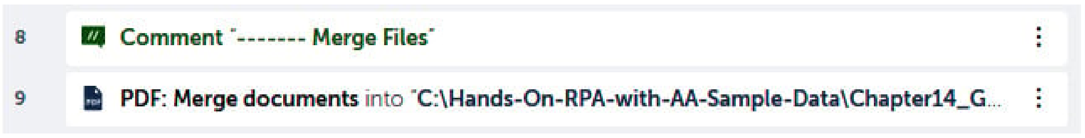
Output file path

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesMerged.pdf

Required extension: ".pdf"
e.g. C:\Users\Admin\Test.pdf

Overwrite existing file ✓

9. Click on **Save**. The development interface for this section should look as in the following screenshot:


8 Comment "------- Merge Files"

9 PDF: Merge documents into "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...

You are once again ready to test your bot. When your bot has finished, you should notice that a new PDF file, called `Chapter14_GamesMerged.pdf`, has been generated. This file is the result of all eight `GamesSplit` files being merged into a single file.

Fantastic work, you should now be able to confidently split and merge PDF documents. In the next section, we will take a look at PDF file security, specifically the encryption and decryption of files.

Encrypting and decrypting documents

Encrypted PDF files are widely used to protect sensitive data. Having the ability to automate encryption and decryption can be a key feature to aid automating manual tasks. In the following section, you will learn how to encrypt and decrypt PDF files using RPA. For this walk-through, we will be using the existing `Chapter14_Games.pdf` file from the GitHub repository.

Encrypting a PDF file

We will use our `Chapter14_Games.pdf` file and apply encryption to this document. Automation Anywhere allows you to apply one of the industry-standard encryption algorithms from RC4 40-bit, RC4 128-bit, or AES 128-bit. Like always, let's begin by adding our comments.

Let's start this walk-through by executing the following steps:

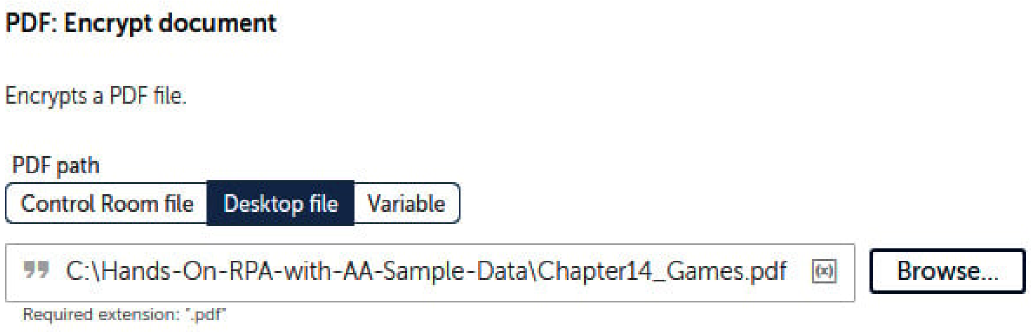
1. Add a new **Comment** action just below line **9**, `"------- Encrypt PDF File"`, and click on **Save**.

2. To encrypt our PDF file, add the **PDF: Encrypt document** action just below line **10** so that you can start to set the properties.

3. Firstly, we need to specify the PDF file that will be used. To do this, set the following property for the **PDF: Encrypt document** action on line **11**:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Games.pdf`

   The property should look as in the following screenshot:


PDF: Encrypt document

Encrypts a PDF file.

PDF path

Control Room file | Desktop file | Variable

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_Games.pdf

Browse...

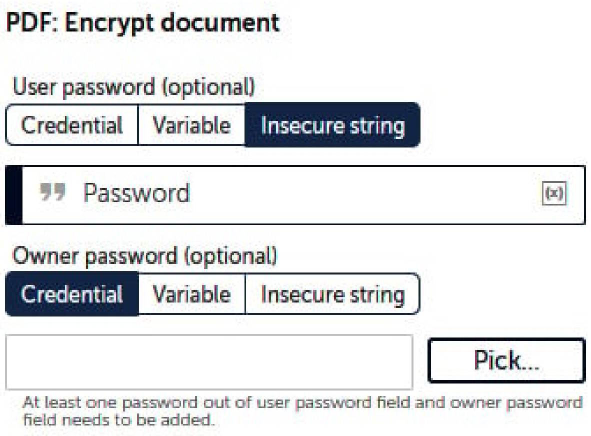
Required extension: ".pdf"

4. Click on **Save**.

5. Next, we need to specify the password. There is an option of applying up to two passwords for your document. This includes a user password and an owner password. At least one of these must be set. We will apply a password to the **User password** property. To do this, set the following property for the **PDF: Encrypt document** action on line **11**:

   User password (optional): **Insecure string** -- `Password`

   The property should look as in the following screenshot:


PDF: Encrypt document

User password (optional)

Credential | Variable | Insecure string

Password

Owner password (optional)

Credential | Variable | Insecure string

Pick...

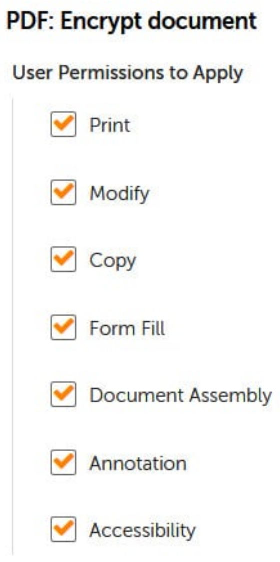
At least one password out of user password field and owner password field needs to be added.

6. Click on **Save**.

7. Next, we need to specify which permissions the password applies to; for this example, we will apply permissions to all. To do this, set the following property for the **PDF: Encrypt document** action on line **11**:

   User Permissions to Apply: *Check all options*

   The property should look as in the following screenshot:


PDF: Encrypt document

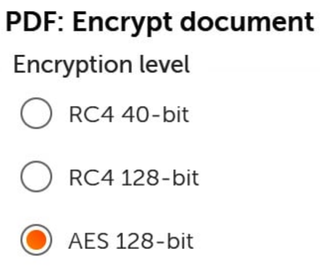
User Permissions to Apply

- ✓ Print
- ✓ Modify
- ✓ Copy
- ✓ Form Fill
- ✓ Document Assembly
- ✓ Annotation
- ✓ Accessibility

8. Click on **Save**.
9. Now, we need to specify the level of encryption we want. For this example, we will apply RC4 128-bit encryption. To apply this to all, set the following property for the **PDF: Encrypt document** action on line **11**:

   Encryption level: **AES 128-bit**

   The property should look as in the following screenshot:


PDF: Encrypt document

Encryption level

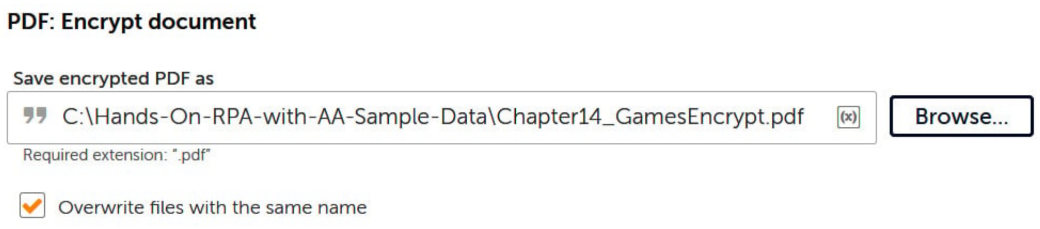
- ○ RC4 40-bit
- ○ RC4 128-bit
- ● AES 128-bit

10. Click on **Save**.
11. Finally, we need to specify the filename of the encrypted output file. To do this, set the following properties for the **PDF: Encrypt document** action on line **11**:

    Save encrypted PDF as: `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesEncrypt.pdf`

    Overwrite files with the same name: *Checked*

    The properties should look as in the following screenshot:


PDF: Encrypt document

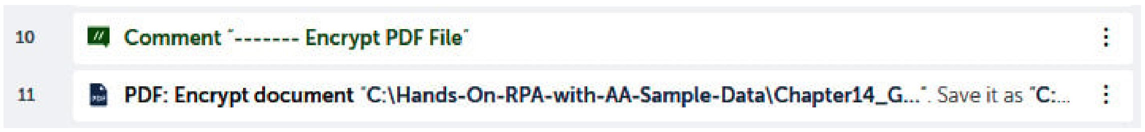
Save encrypted PDF as

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesEncrypt.pdf

Required extension: ".pdf"

☑ Overwrite files with the same name

12. Click on **Save**. The development interface for this section should look as in the following screenshot:


10 Comment "------- Encrypt PDF File"

11 PDF: Encrypt document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...". Save it as "C:...

Go ahead and run the bot. The bot will generate a file named `Chapter14_GamesEncrypt.pdf` , which is password protected and encrypted. Try to open this file. It should prompt you for a password. We have set this to be `Password` . This leads us to the next section, where you will learn how to decrypt a PDF file.

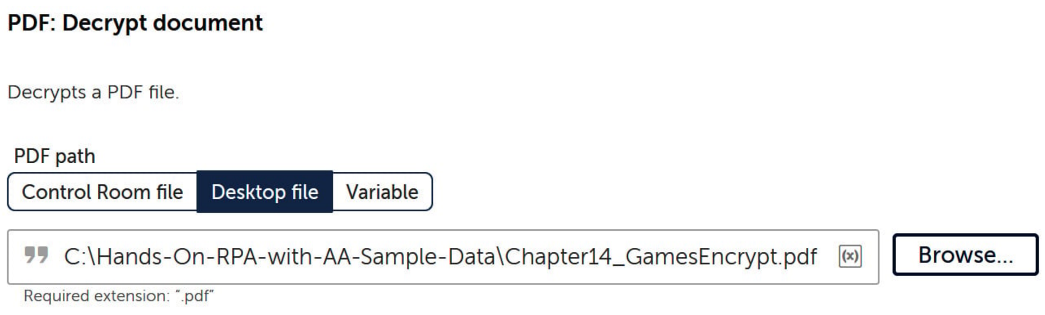
Decrypting PDF files

We will continue with the bot by configuring it to decrypt a PDF file. It's quite handy that in the previous section an encrypted file was created. We can use this as our source file to decrypt. Like always, let's begin by adding our comments:

1. Add a new **Comment** action just below line **11**, `"------- Decrypt PDF File"` , and click on **Save**.
2. To decrypt the encrypted `Chapter14_GamesEncrypt.pdf` file, add the **PDF: Decrypt document** action just below line **12** so that you can start to set the properties.
3. Firstly, we need to specify the PDF file that will be used. To do this, set the following property for the **PDF: Decrypt document** action on line **13**:

   PDF path: **Desktop file** -- `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesEncrypt.pdf`

   The property should look as in the following screenshot:


PDF: Decrypt document

Decrypts a PDF file.

PDF path

Control Room file | **Desktop file** | Variable

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesEncrypt.pdf

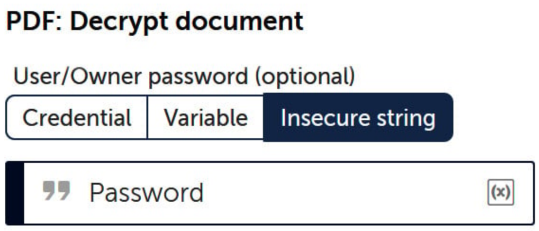
Required extension: ".pdf"

4. Click on **Save**.

5. Next, we need to specify the password. In the previous section, we set the password to be `Password`. To set this for decryption, set the following property for the **PDF: Decrypt document** action on line **13**:

   User/Owner password (optional): **Insecure string** -- `Password`

   The property should look as in the following screenshot:



PDF: Decrypt document

User/Owner password (optional)

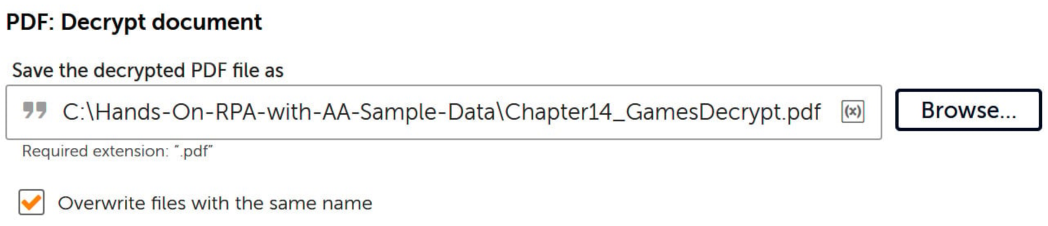
Password

6. Click on **Save**.
7. Finally, we need to specify the output decrypted filename. To do this to all, set the following properties for the **PDF: Decrypt document** action on line **13**:

   Save the decrypted PDF as: `C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesDecrypt.pdf`

   Overwrite files with the same name: *Checked*

   The properties should look as in the following screenshot:



PDF: Decrypt document

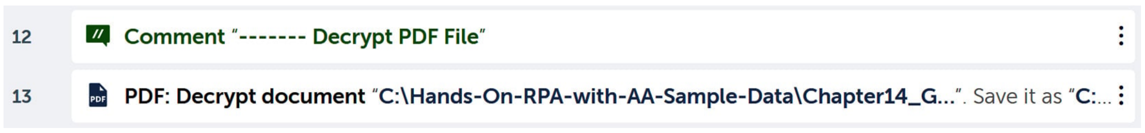
Save the decrypted PDF file as

C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_GamesDecrypt.pdf

Required extension: ".pdf"

✓ Overwrite files with the same name

8. Click on **Save**. The development interface for this section should look as in the following screenshot:



12 Comment "------- Decrypt PDF File"

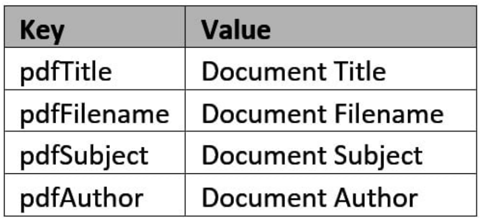
13 PDF: Decrypt document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...". Save it as "C:...

You have successfully configured your bot to decrypt a PDF encrypted file. Run the bot and you will notice a new file created named `Chapter14_GamesDecrypt.pdf`. This file is now decrypted. If you try and open it, it should just open without asking for any passwords.

One other thing to learn about the automation of PDF documents is that there may be instances where you need actual document properties. We will explore how to get these in the next section when we look at the PDF dictionary.

Using the PDF dictionary

As you have been progressing through the walk-throughs, you may have noticed an additional property at the bottom of the properties pane for all the actions referring to the `Dictionary` variable. Automation Anywhere has a pre-built `Dictionary` type variable for PDF documents. For each PDF document your bot reads, the `Dictionary` variable will store the following information:

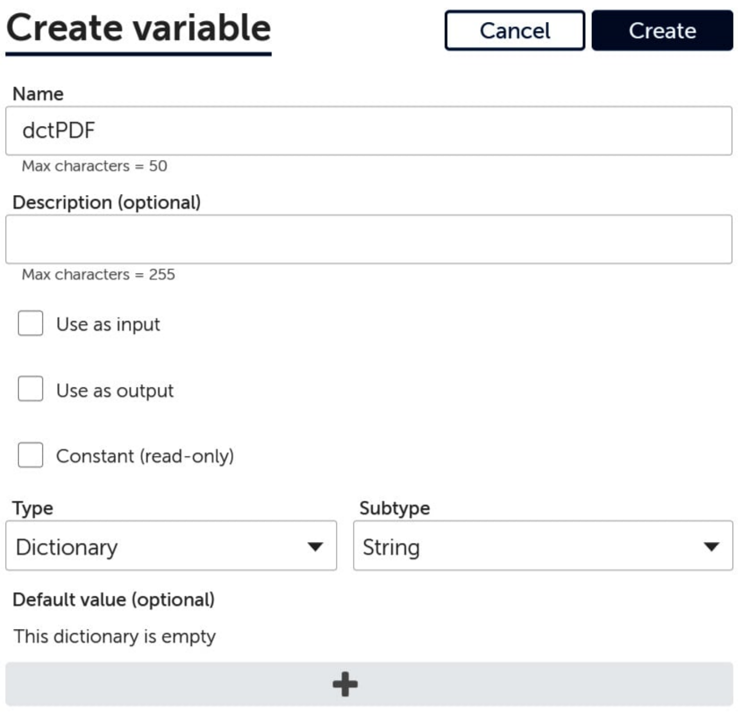


Key	Value
pdfTitle	Document Title
pdfFilename	Document Filename
pdfSubject	Document Subject
pdfAuthor	Document Author

In the following walk-through, you will modify the last **PDF: Decrypt document** action on line **13** to assign the dictionary details to a newly created variable. We can then use a message box to see the document properties.

Let's start this walk-through by executing the following steps:

1. Firstly, we need a `Dictionary` type variable to store the information. Create a `Dictionary` type variable called `dctPDF` and set **Type** to be **Dictionary** and **Subtype** to be **String**, as follows:



Create variable

Name: dctPDF

Max characters = 50

Description (optional):

Max characters = 255

- [ ] Use as input
- [ ] Use as output
- [ ] Constant (read-only)

Type: Dictionary

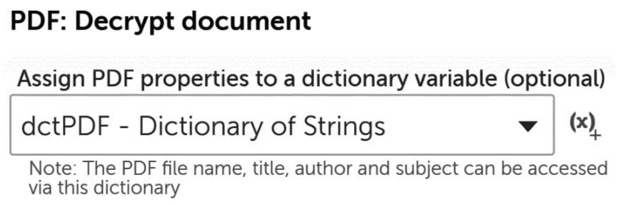
Subtype: String

Default value (optional): This dictionary is empty

2. To assign the file properties to our newly created `Dictionary` variable called `dctPDF`, set the following property for the **PDF: Decrypt document** action on line **13**:

   Assign PDF properties to a dictionary variable (optional): **dctPDF** -- **Dictionary of Strings**

   The properties should look as in the following screenshot:


PDF: Decrypt document

Assign PDF properties to a dictionary variable (optional)

dctPDF - Dictionary of Strings

Note: The PDF file name, title, author and subject can be accessed via this dictionary

3. Click on **Save**.
4. To view the assigned values, add a **Message box** action just below line **13**.
5. For the **Message box** action on line **14**, set the following properties:

   Enter the message box window title: `PDF Dictionary`

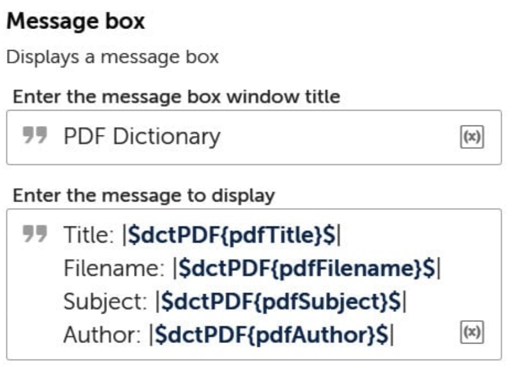
   Enter the message to display: `Title: |$dctPDF{pdfTitle}$|`

   `Filename: |$dctPDF{pdfFilename}$|`

   `Subject: |$dctPDF{pdfSubject}$|`

   `Author: |$dctPDF{pdfAuthor}$|`

   The properties should look as in the following screenshot:


Message box

Displays a message box

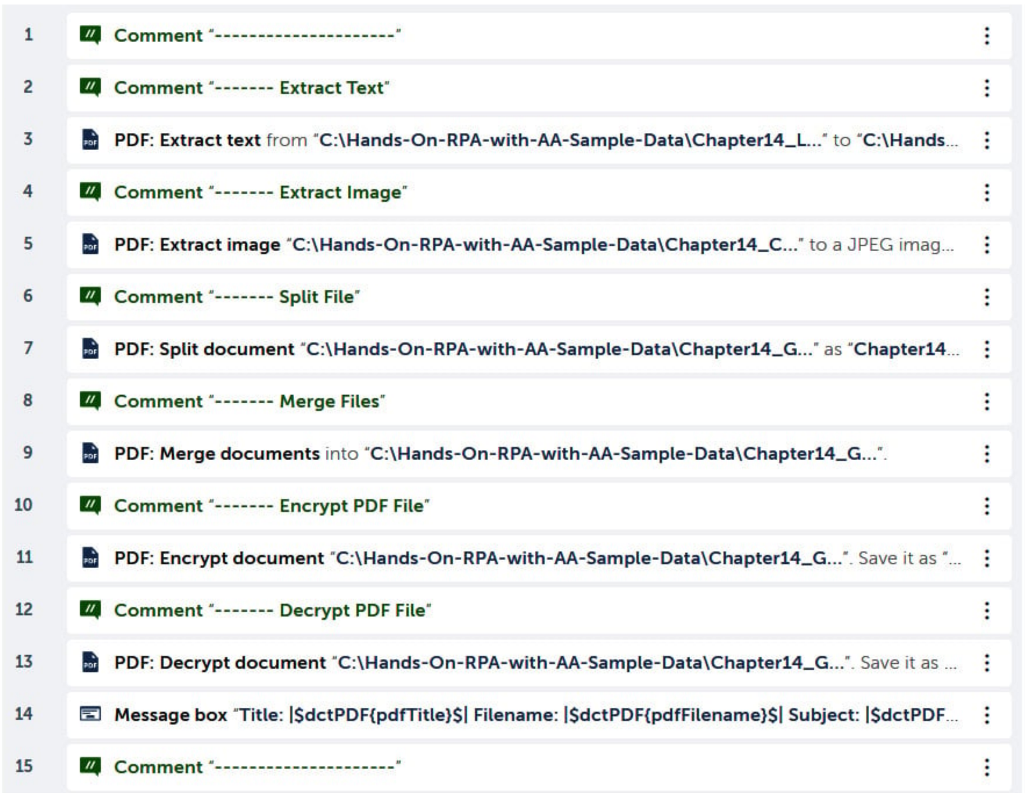
Enter the message box window title

PDF Dictionary

Enter the message to display

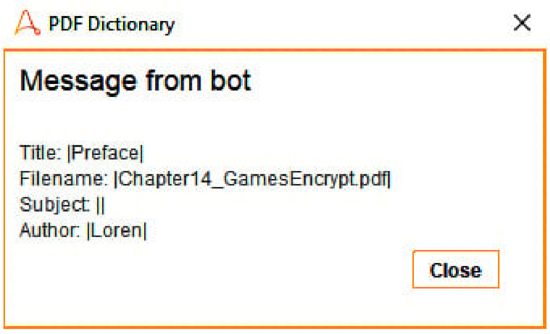
Title: |$dctPDF{pdfTitle}$|
Filename: |$dctPDF{pdfFilename}$|
Subject: |$dctPDF{pdfSubject}$|
Author: |$dctPDF{pdfAuthor}$|

6. Click on **Save**. The complete development interface for this lab should look as in the following screenshot:



```
Comment "--------------------"
Comment "------- Extract Text"
PDF: Extract text from "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_L..." to "C:\Hands...
Comment "------- Extract Image"
PDF: Extract image "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_C..." to a JPEG imag...
Comment "------- Split File"
PDF: Split document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G..." as "Chapter14...
Comment "------- Merge Files"
PDF: Merge documents into "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...".
Comment "------- Encrypt PDF File"
PDF: Encrypt document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...". Save it as "...
Comment "------- Decrypt PDF File"
PDF: Decrypt document "C:\Hands-On-RPA-with-AA-Sample-Data\Chapter14_G...". Save it as ...
Message box "Title: |$dctPDF{pdfTitle}$| Filename: |$dctPDF{pdfFilename}$| Subject: |$dctPDF...
Comment "--------------------"
```

7. When you are ready, please run the bot. The bot will now display a message box containing the document properties. It should look as in the following screenshot:



```
Message from bot

Title: |Preface|
Filename: |Chapter14_GamesEncrypt.pdf|
Subject: ||
Author: |Loren|
```

Great work! You can see all the property information that the bot has extracted from the file. The dictionary can be applied to all the PDF actions we have worked with, such as extracting text and images, merging and splitting files, and encrypting files.

Summary

In this lab, you have learned how to add automation to your PDF-related tasks. The walk-throughs have enabled you to build a bot that performs many actions against PDF documents. This has included extracting text and images from PDF documents, as well as splitting and merging multiple documents. This lab also demonstrated how to encrypt and decrypt files and how to get access to the document properties by using a `Dictionary` type variable.

In the next lab, we will continue working with applications and automation. You will learn how to use RPA to help automate database-related manual tasks. You will also learn about connecting to databases. The walk-throughs will also explore how to perform SQL against databases, including `Insert` and `Delete` statements.