

Experiment-9

Date: 7/4/25

9. Design a process for automating Data tables in Excel.

AIM

To design a process for automating Data tables in Excel using UiPath

PROCEDURE

1. **Open UiPath Studio**

- Launch UiPath Studio on your computer.

2. **Create a New Project**

- Click on “New Process” to create a new automation project.
- Give your project a name and choose a location to save it.

3. **Design the Workflow**

- Drag and drop a “Sequence” onto the canvas. This will be the main container for your activities.

4. **Add Activities for Excel Automation**

- Add activities to perform automation tasks related to Data tables in Excel. Below are the activities you'll use:
- **Excel Application Scope:** Use the “Excel Application Scope” activity to specify the Excel file you want to work with. This activity will open Excel and establish a connection to the file.

Sequence

Read CSV

Read from file *

{ } "C:\User\Desktop\Lab9.csv"

Output to

{ } Output1

Has Header

Write CSV

Write from *

{ } Output1

Write to what file *

{ } "Sports1.csv"

How to write

write

Include headers

Output DataTable as Text

Data Table

{ } Output1

Message Box

Text *

{ } stroutput

Write CSV

Write from *

Output1

Write to what file *

{ } "Sports1.csv"

*How to write

Append

Include headers

OUTPUT

Message Box

SKY, Airtemp, Humidity, Wind

Sunny, Warm, Normal, Strong, Warm

Rainy, Cold, High, Strong, Warm, Same

OK

→ go to project → File Explorer → sports1.csv

DATA 21/07/23

VIVA QUESTIONS

- What activities are available in UiPath for working with Excel?

Ans. ~~UiPath provides Excel specific activities like Read Range, Write Range, Read Cell, Write Cell and Append Range.~~

- What is a Data Table in UiPath?

Ans. ~~A DataTable is a structured table used to store data in rows and columns, similar to an Excel sheet.~~

- What are the common scenarios where you use Data Tables in automation?

Ans. ~~Common scenarios include storing large sets of structured data, performing data validation and transformations & iterating over rows.~~

- What are the different ways to loop through a Data Table?

Ans. ~~i) For Each Row activity iii) Invoke Method .
ii) For Each activity~~

- How do you perform data validation in Excel automation?

Ans. ~~Can be performed using UiPath activities like "Set Data Validation" to apply rules like drop-down lists, number ranges or custom formulas.~~

(AM) 21/5/2024

Experiment-10

Date: 17/03/25

10. Perform email automation.

AIM

Performing email automation typically involves tasks such as sending emails, reading emails, and processing email attachments

PROCEDURE

1. Open UiPath Studio

- Launch UiPath Studio on your computer.

2. Create a New Project

- Click on “New Process” to create a new automation project.
- Give your project a name and choose a location to save it.

3. Design the Workflow

- Drag and drop a “Sequence” onto the canvas. This will be the main container for your activities.

4. Add Activities for Email Automation

- Add activities to perform email automation tasks. Below are the activities you’ll use:
- **Get IMAP Mail Messages:** Use the “Get IMAP Mail Messages” activity to retrieve emails from an IMAP mailbox. Configure the activity to connect to your email server and specify the mailbox and search criteria (e.g., unread emails).

- **For Each:** Use a “For Each” activity to iterate through each retrieved email message.
- **Send SMTP Mail Message:** Use the “Send SMTP Mail Message” activity to send an email. Configure the activity with the necessary details such as sender, recipient, subject, and body.
- **Save Attachment:** Use the “Save Attachment” activity to save attachments from email messages to a specified location on your computer.

5. Configure Activities

- Configure each activity with the necessary inputs and properties. For example:
- Specify the IMAP server settings and mailbox credentials in the “Get IMAP Mail Messages” activity.
- Specify the email details (sender, recipient, subject, body) in the “Send SMTP Mail Message” activity.
- Specify the folder path to save attachments in the “Save Attachment” activity.

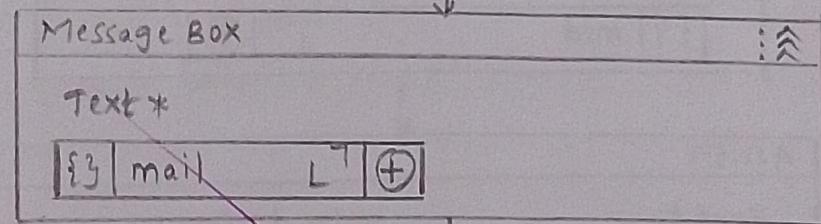
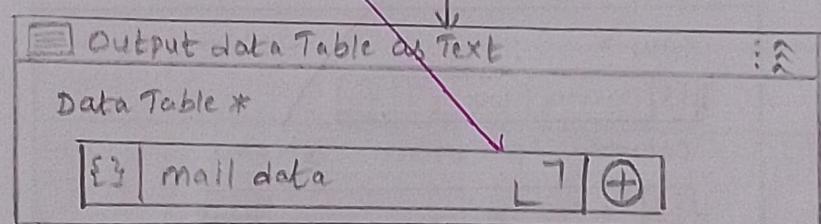
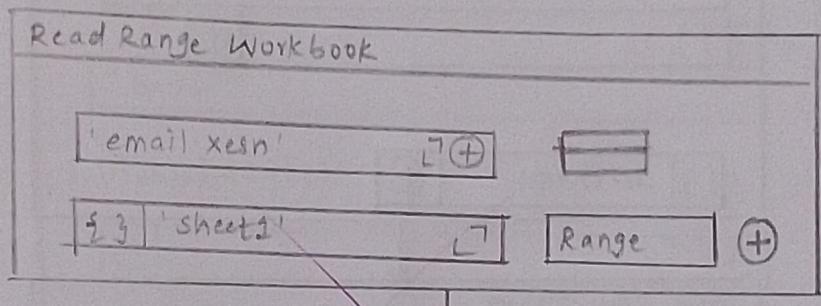
6. Run the Workflow

- Save your workflow and click on the “Run” button in UiPath Studio to execute the email automation process.
- Monitor the execution and verify that emails are retrieved, sent, and attachments are saved as expected.

SOURCE CODE

- Create one excel sheet containing name and email id.
- Enter credentials upto 5 records.
- Save the excel sheet in the folder created in UiPath Studio.
- Open UiPath studio, create Sequence. Take read range workbook, upload the excel sheet and create any variable > change the variable type to DataTable.
- Next take output DataTable > in Data Table give the created, variable name as “mail.data”.
- Click on the properties of output DataTable create output as ‘sheet’ default it is string.

- Create a message box in that assign 'sheet'.
- click on the properties of output Data Table.
- create output as 'sheet' default it is string. Give dataTable as mail.data.
- In item by default it shows current flow.
- In body > take GetRowItem
give column as 0, set-var selectedname, give column name as email, set-var: mids.



For Each Row in Data Table

Data Table

{3} mail data [] (+)

Item name

Current Row

→ Body

Get Row Item

Row #

Column

Get Row Item

Row #

Column

Value

↓
Assign

Save to = Value to save
 {mid}

↓
Send Email

Gmail

Default (22201a05ab@cmrithyderabad.edu.in)

Save as draft

OUTPUT

To *

{3	mid value	L7	⊕
----	-----------	----	---

Subject

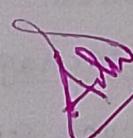
{3	"this is rpa lab"	L7	⊕
----	-------------------	----	---

Body

{ "hello"			
-----------	--	--	--

Attachment(s)

{3	L7	⊕
----	----	---



VIVA QUESTIONS

1. What is email automation in UiPath?

Ans. Email automation in UiPath involves automating tasks like sending, reading, processing email using activity like send outlook mail.

2. What email activities are available in UiPath?

Ans. Email activities like "send outlook mail", "send SMTP mail", "GET outlook mail", "GET IMAP mail".

3. What are the main email protocols supported by UiPath.

Ans. Ui Path supports the main email protocols like SMTP, IMAP, POP3

4. What are the prerequisites for email automation using Outlook activities?

Ans. Prerequisites for email automation using Outlook, in UiPath include Microsoft. Outlook, a configured account, UiPath, Mail, Activities package and valid outlook profile.

5. How do you process emails from multiple accounts in UiPath?

Ans. In UiPath, use separate Get Mail Messages activities for each account, configure their account settings, then loop through and process each email.

AM

Experiment-11

Date: 21/11/25

11. Design a process to read all PDF files from a folder and then close them all

AIM

To design a process to read all PDF files from a folder and then close them all using UiPath.

PROCEDURE

1. **Open UiPath Studio**

- Launch UiPath Studio on your computer.

2. **Create a New Project**

- Click on “New Process” to create a new automation project.
- Give your project a name and choose a location to save it.

3. **Design the Workflow**

- Drag and drop a “Sequence” onto the canvas. This will be the main container for your activities.

4. **Add Activities for PDF Automation**

- Add activities to perform PDF automation tasks. Below are the activities you’ll use:
- **Assign Activity:** Use the “Assign” activity to specify the folder path where your PDF files are located. Store this path in a variable.

- **Directory.GetFiles:** Use the “Directory.GetFiles” method to get a list of all PDF files in the specified folder. Store this list in an array variable.
- **For Each:** Use a “For Each” activity to iterate through each PDF file in the array.
- **Read PDF Text:** Use the “Read PDF Text” activity to read the text from each PDF file.
- **Close Application:** Use the “Close Application” activity to close the PDF reader application (e.g., Adobe Acrobat) after reading each PDF file.

5. Configure Activities

- Configure each activity with the necessary inputs and properties. For example:
- Specify the folder path variable in the “Assign” activity to define the location of your PDF files.
- Specify the array variable containing the list of PDF files in the “For Each” activity.
- Configure the “Read PDF Text” activity to read the text from each PDF file.

6. Run the Workflow

- Save your workflow and click on the “Run” button in UiPath Studio to execute the PDF automation process. monitor the execution and verify that the text is read from each PDF file, and the PDF reader application is closed after processing each file

SOURCE CODE

- Create a folder containing the PDF files that are to be extracted.
- In UiPath Studio, create & save a new process and a folder will be created.
- Cut and paste the folder with PDF files into the above created folder.
- In ‘For Each file in Folder’ activity, browse the folder with PDF files in field of ‘In Folder’ and mention “*.pdf” under Filter by to select only PDF files.
- Use Extract PDF Text to extract text from the PDF's and to store the extracted text, create a variable ‘extractedText’ in its properties.
- Use Write Text File & Append File to get the document with extracted text.

For Each File in Folder

For each
currentFile

In folder *

{ } "c:\Users\Student\Documents\UiPath\B211\Week19/" | + | -

Include subfolders

Skip folders where access is denied

Filter by (ex: *.xlsx) { } " *.pdf "

Order by

Name Ascending first

L → Do

Message Box

Text *

{ } currentFile.FullName

Extract PDF Text

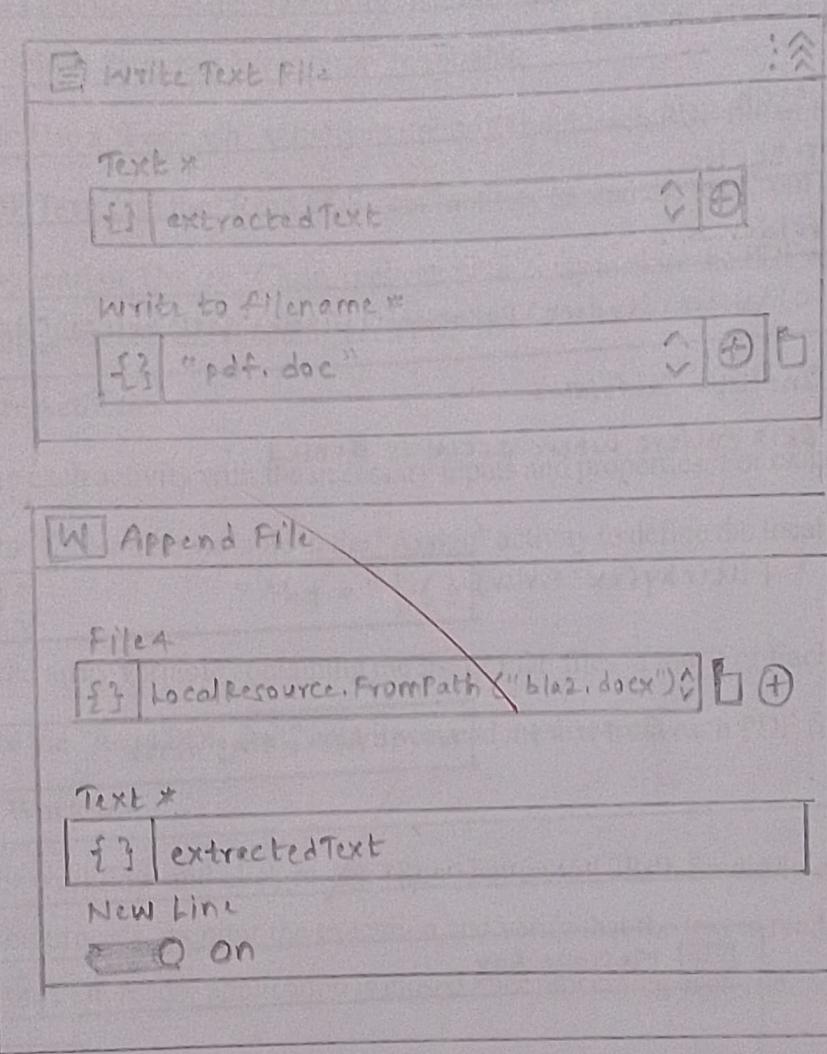
PDF File *

{ } LocalResource.FromPath(currentFile.FullName)

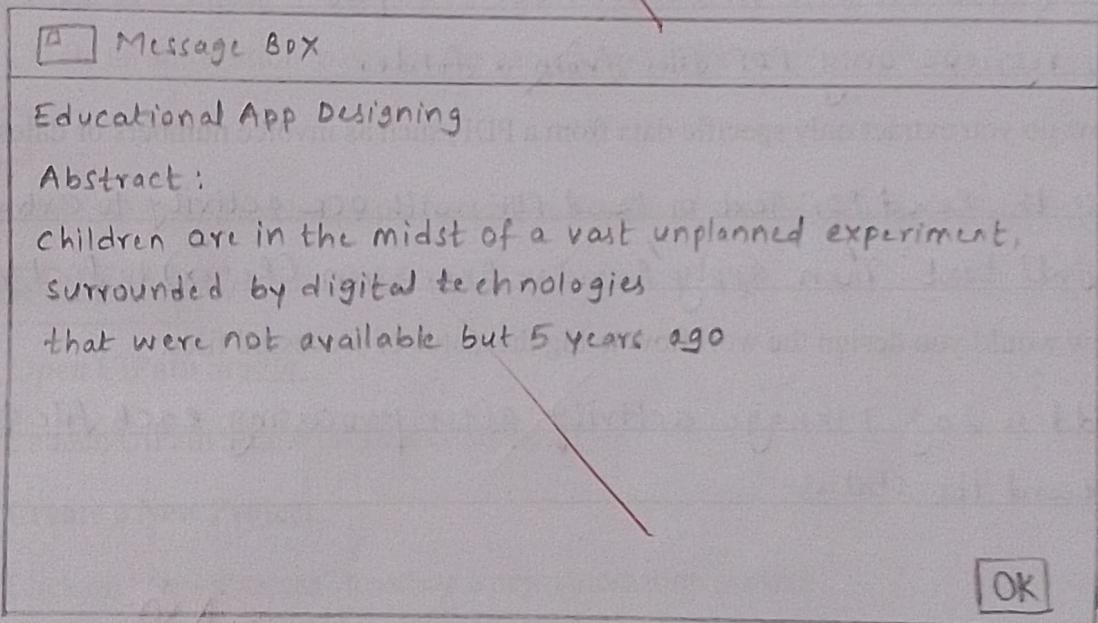
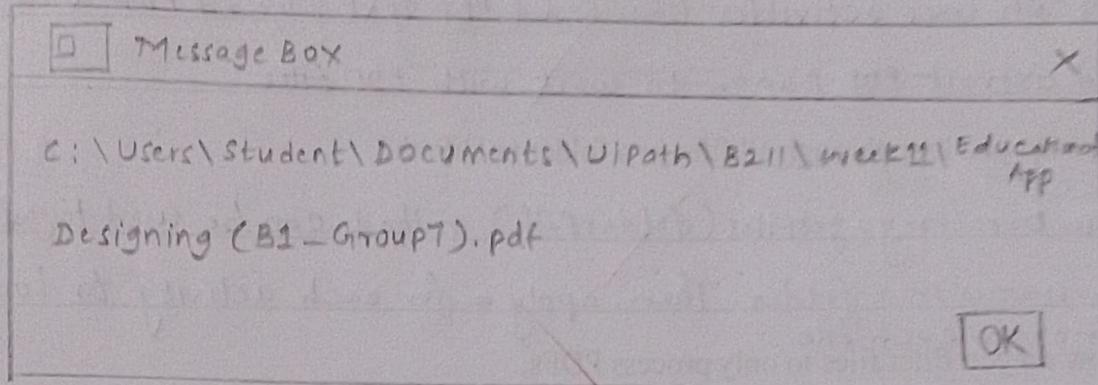
Message Box

Text *

{ } extracted Text



OUTPUT



(Am 21/5/23)

VIVA QUESTIONS

1. What activities are used to work with PDF files in UiPath?

Ans. UiPath user activities like Read PDF Text, Read PDF with OCR and Extract PDF Range to work with PDF files.

2. How do you loop through all files in a folder in UiPath?

Ans. The Directory.GetFiles (FolderPath) method can be used to get all file names in a folder. Then, apply a for each activity to loop through each file.

3. How do you filter files to only process PDFs.

Ans. In for each file in Folder, use ".pdf" under Filter By to retrieve only PDF files from a folder.

4. How do you extract only specific data from a PDF, such as invoice numbers or dates.

Ans. Use the Read PDF Text or Read PDF with OCR activity to extract the full text. Then apply Regular Expression (Regex) to find & extract

5. How would you design the workflow to log the status of processed files.

Ans. Add a Log Message activity after processing each file to record its status.

Amrit
27/3/20

Experiment-12

Date: 21/4/25

12. Create an automation to change the background Color of excel cell/rang.

AIM

Create an automation to change the background Color of excel cell/range in UiPath

PROCEDURE

1. Open UiPath Studio

- Launch UiPath Studio on your computer.

2. Create a New Project

- Click on “New Process” to create a new automation project.
- Give your project a name and choose a location to save it.

3. Design the Workflow

- Drag and drop a “Sequence” onto the canvas. This will be the main container for your activities.

4. Add Activities for Excel Automation

- Add activities to perform Excel automation tasks. Below are the activities you'll use:
- **Excel Application Scope:** Use the “Excel Application Scope” activity to specify the Excel file you want to work with. This activity will open Excel and establish a connection to the file.

- **Write Cell:** Use the “Write Cell” activity to write data to a specific cell in the Excel file. This activity can also be used to change the background color of a cell.

5. Configure Activities

- Configure each activity with the necessary inputs and properties. For example:
- Specify the file path for the Excel file in the “Excel Application Scope” activity.
- Specify the cell address (e.g., “A1”) in the “Write Cell” activity where you want to change the background color.
- Use the **Background** property of the “Write Cell” activity to set the desired background color. You can use color codes (e.g., “#FF0000” for red) or named colors (e.g., “Red”).

6. Run the Workflow

- Save your workflow and click on the “Run” button in UiPath Studio to execute the Excel automation process.
- Monitor the execution and verify that the background color of the specified cell is changed as expected.

SOURCE CODE

- Move the Excel file whose background colour needs to be changed to the folder of the process.
- Browse this excel file under ‘Excel file’ in Use Excel File activity.
- Go to Filters and check ‘Classic’ to get other activities such as Set Range Colour.
- Use the Set Range Color activity. Set Color to the color the cells need to be changed to. Mention the range of cells to be coloured under Range. Specify the SheetName as per the selected Excel file (here ‘Sheet1’)

Use Excel File

Excel file *

"emailauto.xlsx"

Reference to :

Excel

 Save Changes Create if not exists

Read formatting

 Template file Same as project

→ DO

Set Range color

Color *

System.Drawing.Color.Orange

Range *

"A1:A2"

SheetName *

"Sheet1"

OUTPUT

	A	B	C	D
1	Name	Age	ROLL NO	Grade
2	Aa	18	1	A
3	Bb	21	2	B
4	Cc	20	3	A
5	Dd	22	4	C

(Signature)
21/5/25

VIVA QUESTIONS

- What is the purpose of the excel application scope activity?

Ans. ~~The Excel Application Scope activity is used to open an Excel file and provide a container to perform multiple Excel activities inside it.~~

- How do you highlight a specific range in excel using UiPath.

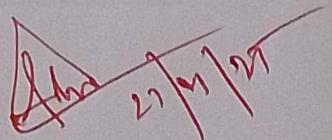
Ans. ~~Use the Excel Application Scope with a Select Range activity to select the specific cells. Then apply Set Range Color activity to highlight the selected range.~~

- How do you ensure compatibility with machines that have different versions of Excel.

Ans. ~~Use Workbook Activities instead of Excel Activities to avoid dependency on installed Excel versions. Design workflows with minimal version specific features.~~

- You need to change the background color of the header row in an Excel file. How would you do it?

Ans. ~~Open the Excel file using 'Use Excel file' and change the background color of the header row by specifying the colour, Range & Sheet in Set Range Color.~~


A handwritten signature in red ink, likely 'Asha', followed by the date '27/3/22'.