

Experiment-5

Date: 17/2/25

5. Design a process for recording-basic, desktop and web

Designing a process for recording interactions in basic, desktop, and web applications using UiPath.

PROCEDURE

1. Identify the Application: Determine the applications (basic, desktop, and web) that you want to record interactions with.

2. Set Up Your Environment

- Install UiPath Studio on your machine if you haven't already.
- Ensure that the necessary browsers (for web recording) and desktop applications are installed and accessible.

3. Create a New Project

- Open UiPath Studio and create a new project for your recording task.

4. Recording Basic Interactions

- For basic interactions, such as keyboard inputs or mouse clicks:
- Use the “Basic Recording” feature in UiPath Studio.
- Open the application you want to interact with.
- Start the recording and perform the desired actions within the application.
- Stop the recording when finished.

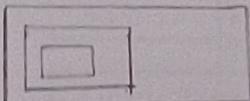
11. Deployment

- Deploy the recorded workflow to the desired environment (e.g., UiPath Studio, Orchestrator) for execution.

SOURCE CODE

- After creating a new process, go to sequence named basic recording.
- Go to activities in the left panel and search for "use application/Browse" and double click on it.
- Now open Notepad and add text to it.
- Now tap on "App/Web recorder"  to record.
- Now go to notepad and double click on it and click on symbol which adds text to the recorder.
- Finally pause and save the recording.
- Now run the activity clicking on it.
- It displays the output.

Use Application : Notepad - Notepad



Application path

"Microsoft windows notepad - 8 week yb3d8bweb A "

Arguments

↳ DO

Type Into "notepad"

Welcome to rpa

Type the

Welcome to rpa Lab

Empty field before typing

single [end, shift ++]

click before typing

single

Verify that welcome to rpa laboratory

Type into "welcome to RPA Laboratory is : "

First Record

"First recording

 Z

single line end shift

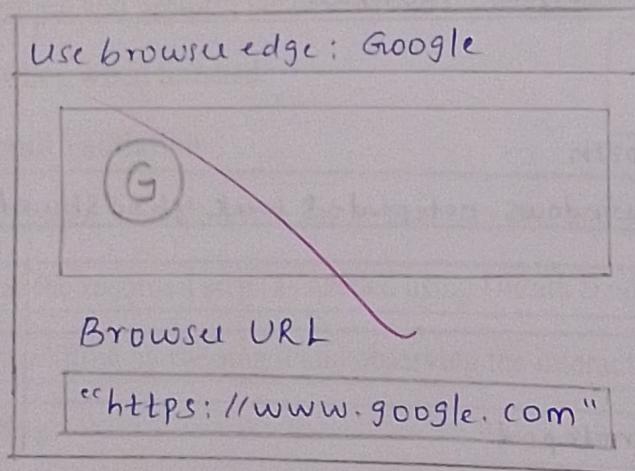
Single

✓

Verify that first recording is typed.

Web application Recording

- Create a sequence named web application.
- Now open edge and type google.com in the search. Go to Vipath and from activities search for we application/browser or double click on it.
- Now tap on "Application/web recorder", (o) to record the process how we are logging in to the mail account.
- Now on "Enter email id", click it and tab.
- Now go to search, tap on and enter text "and mail.com" an interface will open.
- Now click on "enter email id" and tap enter your mail.
- Now click on confirm and click on next and enter your password by clicking on and click on signin.
- Now click on any gmail and tap
- Finally pause the recording and save it.



↳ DO

Type into "https://www.google.com"

Type this

"gmail.com"

Empty field before typing

Singleline

click before typing

single

Keyboard shortcuts

Edge: google

send key combination

Enter X

Type into "INPUT/identified"

Type this

"22r01a05a6@cmrithyderabad.edu.in"

single line

Single

click "Div"

click type

single

mouse button

left

Type into "Enter Password"

Type this

XXXXXX

Empty field before typing

singleline

click before typing

single

Key Click "Div"

click type

single

mouse button

left

Click "label in box"

click type

single

mouse button

left

VIVA QUESTIONS

1. In the "Extracting Text from PDFs" workflow, what activity is used to read text from a PDF?

Ans. ~~The activity used to read from a pdf in a single line is
"Read PDF Text"~~

2. What property filter is used in the "For Each File in Folder" activity to process only PDF files?

Ans. ~~The property filter used is : *.pdf~~

3. List the use cases and importance of data manipulation?

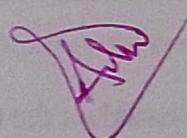
Ans. ~~It is crucial for cleaning, transforming, analyzing and summarizing data to drive insight, ensure accuracy.~~

4. What is importance of data manipulation for gathering?

Ans. ~~It helps clean, organise and structure raw data, making it ready for analysis and decision making.~~

5. What is process design document?

Ans. ~~It outlines the detailed workflow, steps and requirements for automating a business process, serving as a blueprint for implementation.~~



Experiment-6

Date: 24/03/25

6. Designing a process for scraping data using screen scraping and data scraping

Designing a process for scraping data using screen scraping and data scraping in UiPath

PROCEDURE

1. Identify Data Source

- Determine the application or website from which you want to scrape data.

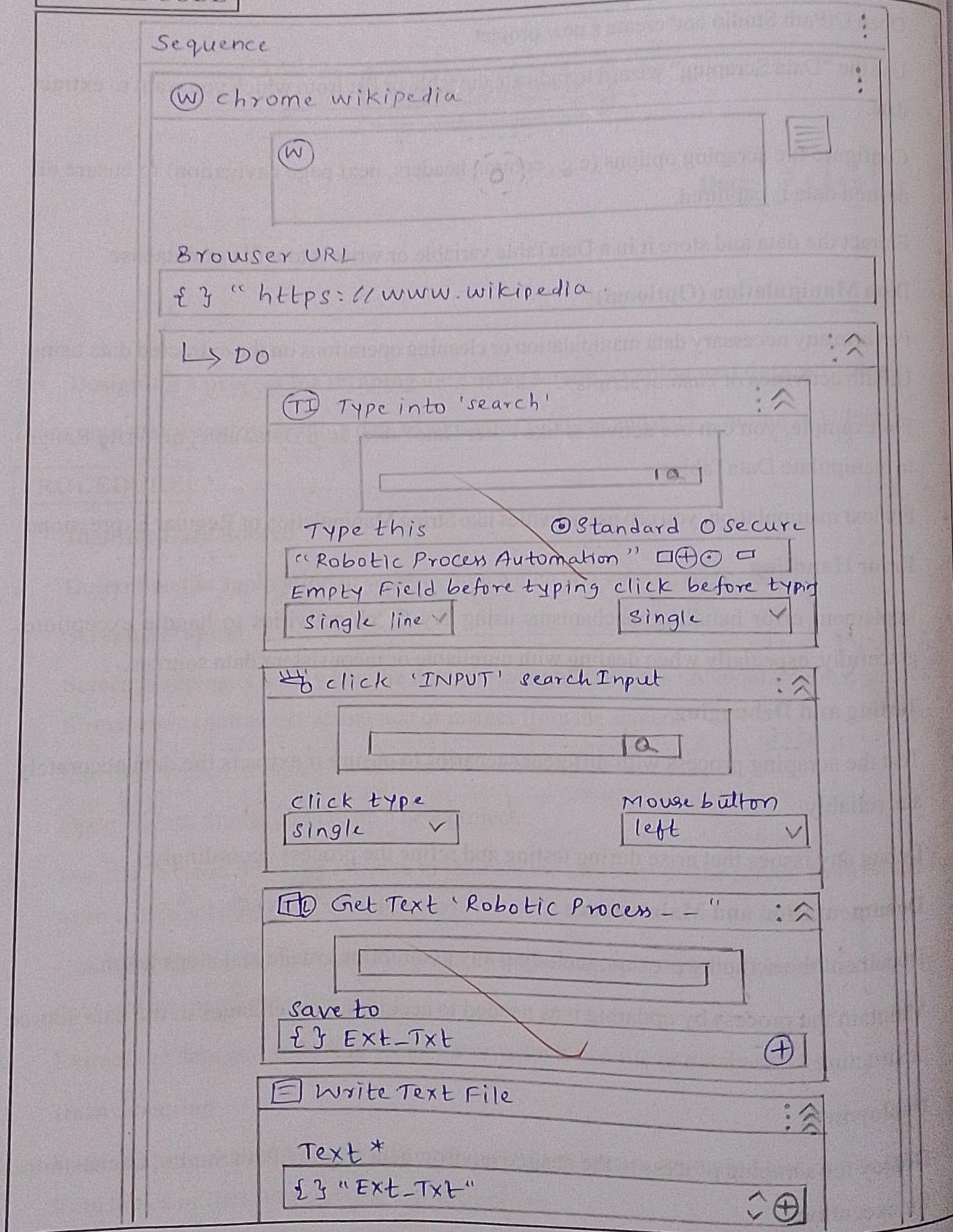
2. Screen Scraping

- Screen scraping is used when the data you want to extract is not available in a structured format and requires extracting text or images from the screen.
- Use the “Screen Scraping” wizard in UiPath Studio:
- Open UiPath Studio and create a new project.
- Use the “Screen Scraping” wizard to indicate the elements on the screen from which you want to extract data (e.g., text, images).
- Configure the scraping options (e.g., OCR engine, scraping method) based on the type of data and its location on the screen.
- Extract the data and store it in variables or write it to a file or database.

3. Data Scraping

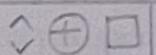
- Data scraping is used when the data you want to extract is structured and can be extracted from tables or lists on a web page or application.

SOURCE CODE



Write to filename

"Robotic Process.... doc"



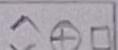
* Data Scraping

Browser



Browser URL

"https://books.toscrape.com"



L → DO

Extract Table Data

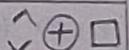


Extract to

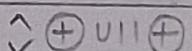
Ext-Data

Write Range Workbook

{ } "Name.xls"



{ } "Sheet1"



{ } Ext-Data



OUTPUT

Screen scraping:

'Go' to project, click on folder and select RPA doc.

Robotic Process Automation (RPA) is a form of business process Automation that is based on software robots (bots) or Artificial Intelligence (AI) agents.

Data scraping

'Go' to project - click on folder and select Name.xls

Book name	Price	Availability
A light in the Attic	\$ 51.77	In stock
Tipping the velvet	\$ 53.74	In stock
Sovmission	\$ 50.70	In stock
sharp Objects	\$ 47.82	In stock
The Requiem Red	\$ 54.23	In stock
The Dirty secrets	\$ 22.65	In stock

(Add 7/4/23)

VIVA QUESTIONS

1. What is the difference between screen scraping and data scraping?

Ans. Screen scraping is used to extract data from UI elements visible on the screen while Data scraping extracts structured data from web pages.

2. What are the scenarios where you would use screen scraping vs. data scraping?

Ans. Use screen scraping when data is displayed in applications where traditional selectors don't work. Use Data scraping when extracting structured data from web pages.

3. What activities are used for screen scraping in UiPath?

Ans. Here, Get Full Text, get Visible Text, and OCR-based activities like Get OCR Text are used.

4. How would you scrape text from an image in a desktop application.

Ans. Use OCR (Optical Character Recognition) activities like Get OCR Text.

5. What are the limitations of screen scraping techniques?

Ans. - Accuracy Issues

- Dynamic UI

- Performance

- Dependency on Visual Elements

(Signature)

Experiment-7

Date: 24/02/25

7. Perform automation for customizing selectors.

AIM

To perform automation for customizing selectors, you can follow these steps using UiExplorer and editing selectors in the properties of activities.

PROCEDURE

1. **Identify the Target Element**

- Open UiPath Studio and create a new project or open an existing one.
- Identify the UI element you want to interact with in your automation process.

2. **Use UiExplorer to Customize Selector**

- Click on the “Indicate element inside browser” or “Indicate element inside window” option in the UiPath Studio toolbar.
- Hover your mouse over the target element, and UiExplorer will highlight it.
- Click on the target element to inspect its properties in UiExplorer.

3. **Customize Selector Properties**

- In UiExplorer, review the properties of the selected element.
- Customize the selector properties as needed to ensure a robust and reliable selection.

- Adjust the selector to include unique attributes that identify the element, avoiding properties that may change dynamically.
- Use wildcards (*) where necessary to handle dynamic attribute values.
- Remove unnecessary or volatile properties from the selector to improve stability.

4. Validate Selector

- After customizing the selector, click on the “Validate” button in UiExplorer to ensure that the selector correctly identifies the target element.
- Verify that the selector is unique and does not match unintended elements on the screen.

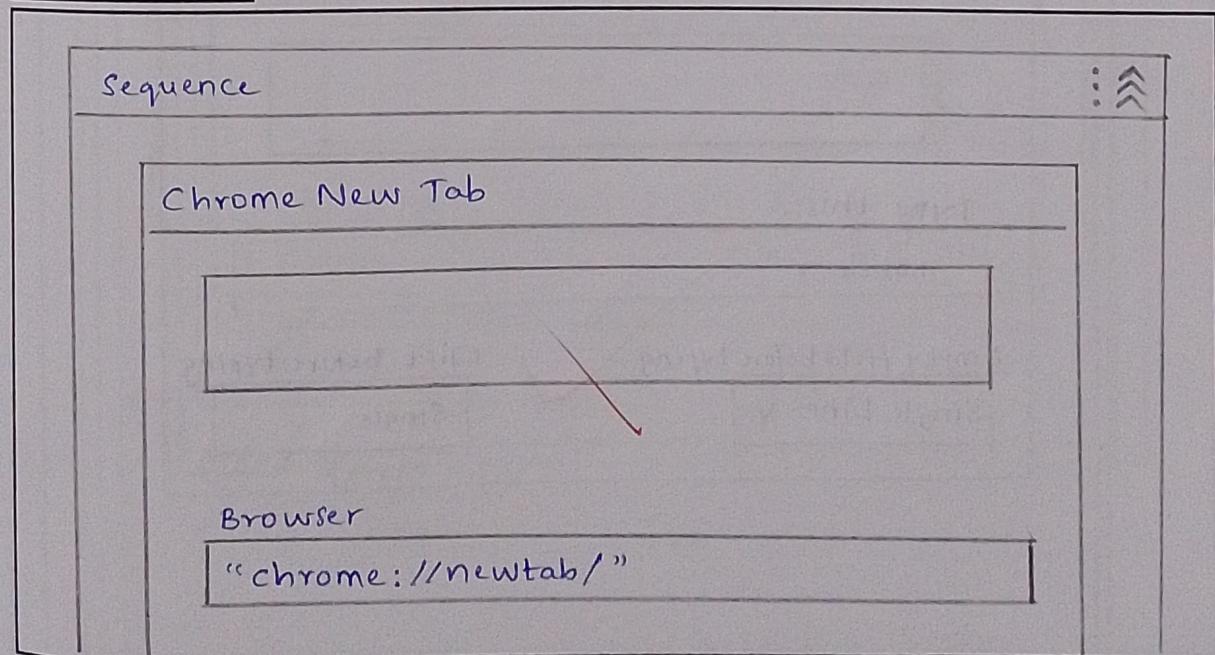
5. Update Selector in Activity Properties

- Open the activity (e.g., Click, Type Into) that interacts with the target element.
- In the properties pane of the activity, locate the “Selector” field.
- Paste the customized selector into the “Selector” field to replace the default selector.

6. Test the Automation

- Test the automation process to verify that the customized selector correctly identifies and interacts with the target element. Run the workflow and observe the behavior of the activities interacting with the element

SOURCE CODE



↳ DO

Type into "editable text address"

Type this

amazon.in

Standard Source

Empty field before leaving

Single line [End]

click before typing

Single



Keyboard Shortcut

Send Key Combination

Enter

Type into "INPUT two tab search"

Type this

"mobile ↵"

Empty field before typing

Single Line

click before typing

Single

Keyboard shortcut -

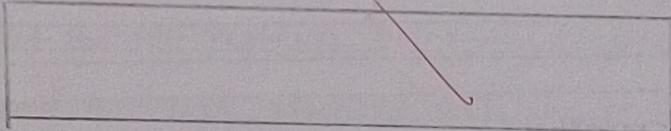
Send Key Combination

Down X Enter X

Hover "Prime"

Prime ✓

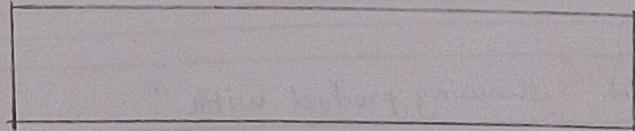
Get Text "update location"



Save to

output

Double click "update location"



Click type

Double

Mouse button

Left

OUTPUT

Type into "All"

Type this

"Perfumes"

Empty field before typing

Single Line

click before typing

Single

Keyboard Shortcuts

Enter *

Take screenshots

FileName

"Screenshot.png"

highlight - "showing product with"

indicate

VIVA QUESTIONS

1. What is a selector in UiPath?

Ans. A selector in UiPath is a string that defines the properties of an element on the screen to uniquely identify it.

2. Why are selectors important in UiPath automation?

Ans. They enable reliable and precise interaction with UI elements.
Ensure the correct element is targeted for actions.

3. What are the key components of a selector?

Ans. - Tag: identifies type of UI element - wildcards: * or ? to make selector flexible
- Attributes: defines unique properties of element.

4. What is the purpose of an anchor base in selectors?

Ans. It provides a stable reference point for finding UI elements. Allows you to find a target-element relative to another nearby element.

5. What is Ui-Explorer, and how is it used?

Ans. Ui Explorer is a tool used to inspect, build and validate selectors in UiPath - helps users find and fine-tune UI elements' selectors.

16/3/25

Experiment-8

Date: 10/03/25

8. Create a process for image and text automation

AIM

To create a process for image and text automation in UiPath, we'll design a simple workflow that involves extracting text from an image using OCR (Optical Character Recognition) and performing text manipulation tasks.

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 Image and Text Automation

- Add activities to perform image and text automation tasks. Below are the activities you'll use:

Perform automation for image and text

1. Launch UiPath Studio on your computer
2. Click on "new process" to create a new automation project
3. Drag and drop a sequence onto the canvas and now you can add activities to perform automation.
4. Add the use App/Web Recorder

Then go to google and open the tab you want to automate and choose that

Then it takes in the browser URL.

5. Next add activity. Get OCR Text.

Select the image you want to apply to the image will get selected.

6. Click on the UiPath screen OCR and here in the API field you need to enter your API key.

7. To fetch your API Key

Go to Admin → License

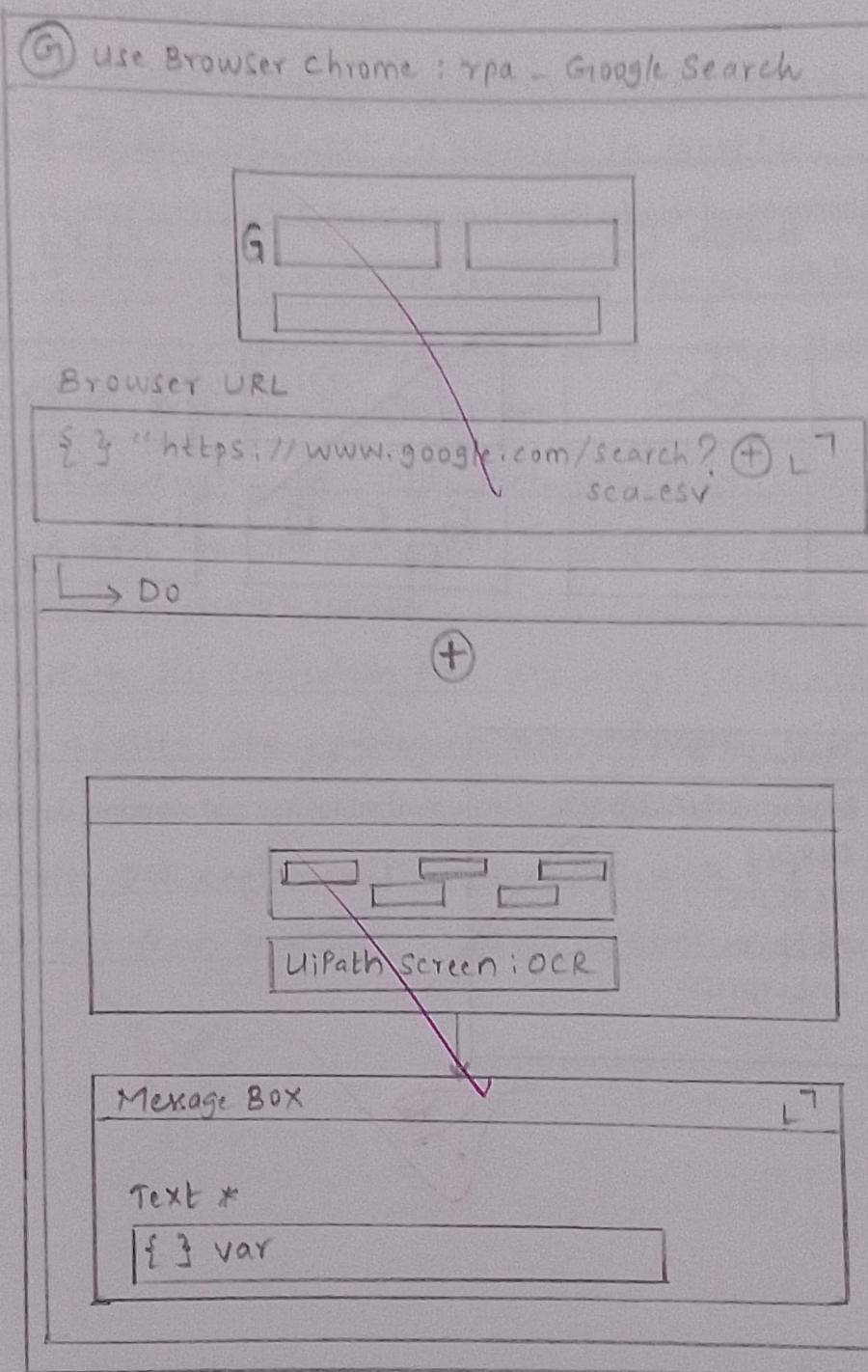
Start trial version → click on Consumables

copy API key.

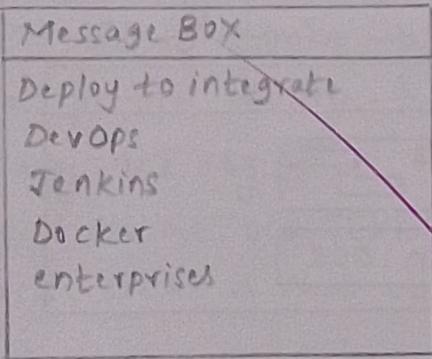
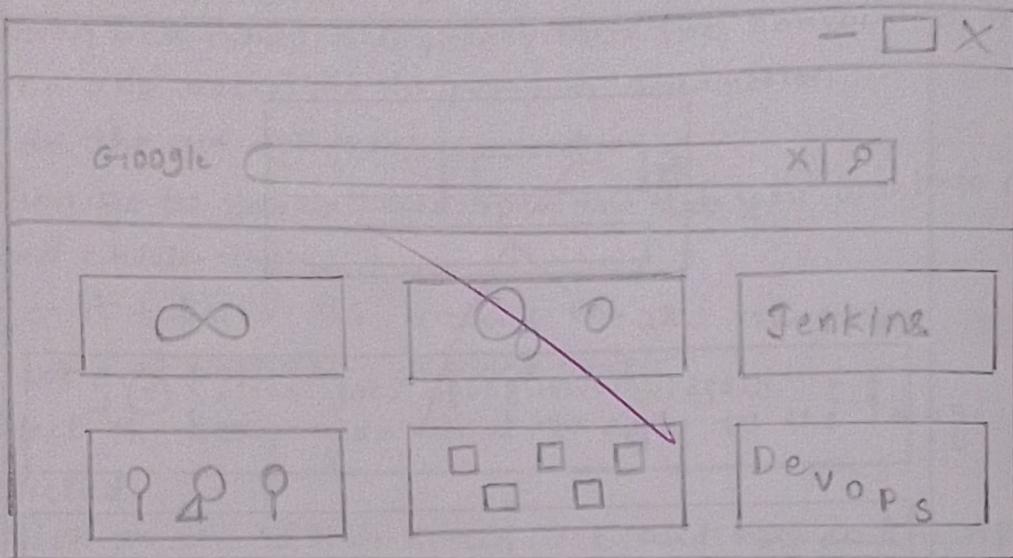
8. Select the GET OCR TEXT box. Then in output in the text field, create a new variable.

Set var: val

9. Now add a message box and in the text field and val



OUTPUT



VIVA QUESTIONS

1. What is OCR in UiPath, and why is it used?

Ans. OCR in UiPath extract from images or scanned documents, enabling automation of non-selectable UI elements in workflow.

2. What is the difference between OCR-based automation and selector-based automation.

Ans. OCR based automation extracts text from images while selector based automation interacts with UI elements using structure selectors for precise identifications.

3. What are the common OCR engines available in UiPath?

Ans. Common OCR engines in UiPath include Google OCR, Microsoft OCR, Tesseract OCR and OmniPage OCR for text extraction.

4. What are the limitations of OCR in UiPath?

Ans. OCR in UiPath has limitation like accuracy, issues, dependency on image quality, slow-processing and difficulty with complex layout.

5. How would you automate text extraction from a multi-page scanned document?

Ans. Use UiPath OCR engine with "Read PDF with OCR" activity to extract text from multipage scanned document efficiently.

A/w