Robotic Process Automation (RPA) Project Using UiPath: Unicorn Name Generator Automation

Project Overview

In this beginner-friendly automation project, I developed a Robotic Process Automation (RPA) workflow using UiPath to automate the task of generating a fun unicorn name based on user input. The project demonstrates core RPA concepts such as UI interaction, file handling, and process automation within the UiPath platform.

The automation accepts a user's name, inputs it into an online unicorn name generator, retrieves the generated name, saves it to a text file, and displays the output to the user via Notepad. This workflow showcases the practical use of web automation and file system integration in a real-world scenario.

Tools & Technologies Used

- **UiPath Studio** — For designing and developing the automation workflow
- **Activities Utilized:** Input Dialog, Start Process, Use Application/Browser, Type Into, Click, Get Text, Write Text File, Message Box
- **Notepad** — To open and display the saved text file output
- **Browser** — For accessing the unicorn name generator website

Project Workflow Description

1. **User Input Collection**
   The automation begins by prompting the user to enter their name via an Input Dialog activity. This interaction allows for dynamic input without modifying the automation code.

2. **Browser Launch and Navigation**
   The automation uses the Start Process and Use Application/Browser activities to launch the default web browser and navigate to a public unicorn name generator website.

3. **Name Entry and Generation**
   Using Type Into and Click activities, the user's input name is entered into the appropriate field on the website, and the automation triggers the name generation function.

4. **Retrieval of Generated Name**
   The Get Text activity extracts the generated unicorn name from the webpage, capturing it for further processing.

5. **Saving to a Text File**
   The generated unicorn name is saved into a `.txt` file using the Write Text File activity. Careful file path management ensures compatibility across different system drives.

6. **Displaying the Result**
   Finally, the automation opens the saved text file in Notepad (via Start Process) and displays a success message box to inform the user that the process completed successfully.

Key Learnings and Challenges

- **UI Automation Fundamentals:** Gained hands-on experience with core UiPath activities essential for interacting with user interfaces on browsers and desktop applications.

- **Dynamic User Input Handling:** Learned how to incorporate flexible user inputs that make the automation reusable and adaptable.

- **File Handling in Automation:** Understood the importance of correct file path management and how to write and read from text files within an automation workflow.

- **Debugging and Error Handling:** Explored UiPath's debugging tools and learned how to troubleshoot common automation issues such as element selectors and permission errors.

- **Understanding UiPath Design Paradigms:** Distinguished between Modern and Classic Design workflows, choosing appropriate methods for this project.

Future Enhancements

- Integrate error handling to manage unexpected website layout changes or connectivity issues.

- Extend the project to generate and save multiple names in a batch process.
- Explore API-based automation for more reliable data extraction.
- Incorporate logging mechanisms for better workflow monitoring.

Conclusion

This project marked my first practical experience building an end-to-end automation workflow with UiPath, providing valuable insights into the power and flexibility of Robotic Process Automation. Through automating the unicorn name generation process, I gained hands-on skills in browser automation, dynamic user input handling, and file system integration.

I also learned the importance of carefully managing UI selectors, file paths, and debugging to ensure smooth execution. Although the project was simple, it laid a strong foundation for understanding how RPA can streamline repetitive tasks and improve productivity.

Moving forward, I am motivated to explore more complex automations, incorporate advanced error handling, and leverage APIs to build scalable, reliable, and maintainable RPA solutions. This project has sparked my enthusiasm for pursuing a career in RPA and automation technologies.