



---

## **Generating Identity Card in RE Framework without Orchestrator Queue using RPA UiPath**

*Sandhiya S, Asso. Prof. Mr. J. Jayapandian*

Krishnasamy College of Engineering and Technology, Cuddalore.

---

### **ABSTRACT:**

The process of creating ID cards using UiPath, an RPA (Robotic Process Automation) tool, starts with the collection of necessary details, such as employee information or student data, which can be obtained from Excel sheets. UiPath's automation capabilities enable the extraction of relevant data from these sources. Once the data is obtained, the next step involves designing the ID card layout. UiPath provides activities to interact with design software, such as Adobe Photoshop or Illustrator, allowing the robot to create a visually appealing ID card template.

**Key Terms: UiPath, RPA, Automation, Robotic Process Automation.**

---

### **I. Introduction**

In today's technologically advanced world, organizations rely on various systems and processes to streamline their operations. One critical aspect of managing employees and ensuring secure access to facilities is the generation of identification cards (ID cards). Traditionally, ID card generation involves a manual and time-consuming process, which can be prone to errors.

The ID Card Generation project aims to automate the process of generating identification cards using Robotic Process Automation (RPA) with UiPath. This project eliminates the need for manual intervention, reduces errors, and increases efficiency in generating ID cards for employees, students, or any other individuals within an organization or institution. The ID Card Generation project using RPA UiPath streamlines and automates the process of creating identification cards. It offers customization, data validation, image processing, barcode generation, printing, and reporting features, resulting in increased efficiency, accuracy, and cost savings for organizations.

The results demonstrate significant time savings, reduced error rates, and improved overall productivity compared to the traditional manual approach. We also discuss potential challenges and limitations that organizations may encounter when implementing UiPath automation for identity card generation, along with recommendations for overcoming these hurdles.

---

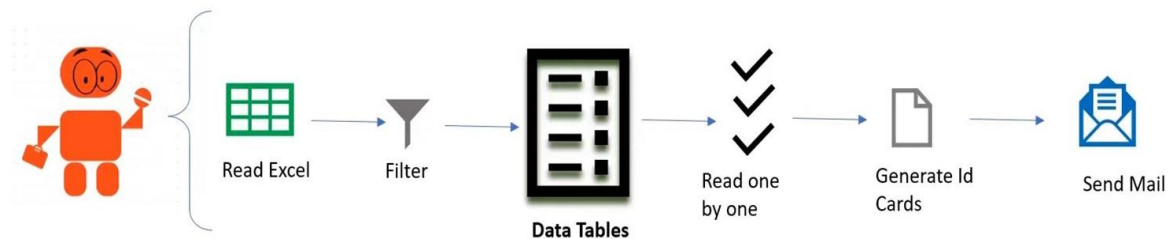
### **II. Literature view**

1. Chavan Abhijit B, Lokhande Nisha R, Savkar Rekha P, Bhagwat Vaishnavi R, Prof. Kenge Jayant P [1] presents a Student ID Card Generator system that will help to generate the Id cards for the employees of any organization or for the students and teachers of the educational institutes without any difficulty.
2. Sagar Bora, Dev Ahuja, Abdullaha Shaikh, Dhruv Aswani, Dashrath Kale,[2] presents an Online ID Card Generator To make this software user friendly we go through all surveys and do our research as much as we can. The application of the project becomes very easy and convenient at the user-end since they have to visit the web app, simply Select the type of Id card they want to get done and they will find all related templates on the selected title.
3. Ravi Kumar, Rahul Chandra Das, Rahul Yadav, Subhadip Mondal, [3] presents a Smart ID-Card The system which is an integration of high-tech achievements with respect to network technology, information technology and communication technology can provide not only the most efficient and convenient information management for different divisions of the college, but centralized and unified information sharing and services for teachers and students as well.

### III. Proposed Methodology

In this paper, The proposed system aims to automate the process of generating identity cards using the Robotic Enterprise (RE) Framework in UiPath. By leveraging the capabilities of UiPath and the structure provided by the RE Framework, the system enables organizations to streamline the identity card generation process, improve accuracy, and enhance operational efficiency.

The first step in the proposed methodology is to conduct a thorough requirement analysis. This involves understanding the specific requirements and constraints of the identity card generation process. It includes identifying data sources, validation rules, template design specifications, and any other relevant considerations.



*Figure 1: Proposed model for identity card generation in RE Framework*

The proposed methodology outlines the steps involved in generating identity cards in the RE Framework using UiPath. By following this structured approach, organizations can automate and streamline the identity card generation process, ensuring data accuracy, scalability, and operational excellence.

UiPath's capabilities, along with the robustness of the RE Framework, provide a powerful combination for efficient and reliable automation solutions.

### IV. Functions

1. **Data Extraction:** Data extraction refers to the process of retrieving specific information or data from a larger dataset, database, or source. It involves identifying and isolating the relevant data that meets certain criteria or requirements. Data extraction is a crucial step in data analysis, reporting, and decision-making, as it allows you to focus on the specific information you need rather than dealing with the entire dataset.

Determine the location and format of the data you want to extract. It could be stored in a database, spreadsheet, text file, web page, or any other structured or unstructured format. Determine the specific criteria or conditions for extracting the desired data. This could involve specifying date ranges, filtering based on certain values or attributes, or defining complex queries.

2. **Design Automation:** Design automation refers to the process of using software tools and technologies to automate and streamline design tasks and workflows. Design automation aims to improve efficiency, accuracy, and productivity in design activities. In the context of ID card generation using RPA (Robotic Process Automation) with UiPath, the design automation module refers to the part of the automation process that focuses on creating and customizing the ID card design based on predefined templates or specifications. Once the design customization and validation steps are complete, UiPath can generate the final output in the desired format, such as a printable PDF file or an image file. This output can then be used for further processing, printing, or distribution.
3. **Data Integration:** Data integration refers to the process of combining data from multiple sources, formats, or systems into a unified and consistent view. It involves bringing together data from different databases, applications, files, or platforms to provide a comprehensive and integrated representation of the data.

Data integration begins with identifying the various sources from which data needs to be integrated. These sources can include databases, spreadsheets, data warehouses, cloud-based systems, APIs, or even external sources like partners or vendors.

The data integration module maps the extracted data fields to the corresponding fields in the ID card template. This ensures that the right information is populated in the correct sections of the ID card. Data validation checks can be implemented to ensure the accuracy and completeness of the integrated data.

4. **Error Handling and Logging Module:** Error handling and logging are important components of software development and automation processes. They help identify and manage errors, exceptions, and unexpected events that occur during the execution of a program or automation workflow. Error handling involves identifying errors, exceptions, or abnormal conditions that occur during the execution of a program or automation workflow. Errors can be caused by various factors such as invalid inputs, system failures, network issues, or logical errors in the code.

Logging mechanisms typically support different log levels, such as debug, info, warning, and error. Each log level corresponds to a specific severity or importance of the logged message. This allows developers or operators to filter and prioritize log messages based on their significance.

Error handling and logging are crucial for maintaining the reliability, stability, and maintainability of software applications and automation processes. They help identify and resolve errors efficiently, provide insights into the execution flow, and assist in debugging and troubleshooting efforts.

5. **Generation and Distribution:** Generation and distribution refer to the processes involved in creating and disseminating information, documents, or outputs to relevant recipients or stakeholders. Generation begins with processing or manipulating the relevant data to generate the desired output. This can involve calculations, transformations, formatting, or other operations to derive the required information. Generation also involves creating the content or documents based on the processed data. This may include generating reports, invoices, certificates, or any other form of structured or unstructured information.

The generated content is formatted in the appropriate file format, such as PDF, Word, Excel, or HTML, based on the intended distribution channels or recipients' preferences. The distribution process involves identifying the relevant recipients or stakeholders who need to receive the generated content. This can be determined based on predefined rules, user preferences, or specific criteria.

The distribution module determines the recipients of the generated ID cards. This can be based on predefined rules, employee databases, or other sources of information that specify who should receive the ID cards.

The module facilitates the delivery of ID cards to the respective recipients. This can involve various methods such as printing the ID cards, sending them via email, uploading them to a secure portal, or any other distribution channel specified by the organization.

---

## V. Conclusion

In conclusion, ID card generation using RPA UiPath offers numerous benefits, such as increased efficiency, accuracy, and scalability.

By leveraging the power of RPA and utilizing UiPath's automation capabilities, organizations can streamline the ID card generation process and improve overall productivity. The use of the RE Framework provides a structured approach, ensuring robustness, error handling, and traceability.

Overall, implementing identity card generation in RE Framework using UiPath brings numerous benefits, including increased productivity, reduced human errors, and improved data accuracy.

By automating this process, organizations can save time, resources, and effort while ensuring consistency and compliance with established procedures.

---

## VI. Future work

As a future scope, developing a self-service portal where employees can request and manage their ID cards can empower users and reduce administrative overhead. The portal can integrate with the RPA UiPath solution in the RE Framework to automate the processing of requests, provide real-time status updates, and enable employees to make updates or corrections to their information.

Also implementing advanced OCR capabilities can enhance the system's ability to extract data accurately from various document formats, including scanned IDs or handwritten forms.

Intelligent OCR can improve the recognition accuracy and handle complex layouts, increasing the automation's efficiency and reducing manual intervention.

---

## VII. References

1. Chavan Abhijit B, Lokhande Nisha R, Savkar Rekha P, Bhagwat Vaishnavi R, Prof. Kenge Jayant P, "STUDENT ID CARD GENERATOR", International Research Journal of Modernization in Engineering Technology and Science, [www.irjmets.com](http://www.irjmets.com), e-ISSN: 2582-5208, Volume:05/Issue:04/April-2023 Impact Factor- 7.868.
2. Sagar Bora, Dev Ahuja, Abdullaha Shaikh, Dhruv Aswani, Dashrath Kale, "ONLINE ID CARD GENERATOR", International Research Journal of Modernization in Engineering Technology and Science, [www.irjmets.com](http://www.irjmets.com), e-ISSN:2582-5208, Volume:04/Issue:04/April-2022 Impact Factor- 6.752.
3. Ravi Kumar, Rahul Chandra Das, Rahul Yadav, Subhadip Mondal, "SMART ID-CARD", Ravi Kumar et al, International Journal of Computer Science and Mobile Computing, ISSN 2320-088X, [www.ijcsmc.com](http://www.ijcsmc.com), Vol.5 Issue.4, April- 2016.
4. How can someone get ID cards? <https://www.template.net/design-temp/ates/card-templates/how-to-create-student-id-card/>
5. Use case for ID Card generation in Automation <https://mukeshkala.com/>