RPA PDD: Gestionarea Distribuției Invitațiilor UVT

RPA PDD (Process Definition Document)	
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1 Introduction

1.1 Purpose of the Document / Context

The purpose of this document is to detail the process of managing the distribution of invitations for UVT events.

Process: The user has to make an invitation and complete it manually,
They need to add data from Excel manually and then make a mail to send the invitation.

Conditions: You need a Gmail account.

After Automation the system will do everything speeding up the process reducing errors and effort. The invitation will be saved as a new file for each individual.

1.2 Document Revision History

Version	Change Description	Date	Author
1.0	Initial version	27.11.2023	Gauca Tudor,Diaconescu Luciano
1.1	Second version: description of added value/ updates	16.01.2024	Gauca Tudor,Diaconescu Luciano

1.3 Automation Objectives/Goals

Efficient Invitation Generation:

Automate the process of extracting relevant data from an Excel file.

Populate a Microsoft Word template with the extracted data to create personalized invitations for each individual listed in the Excel file.

Seamless Email Integration:

Automate the creation and sending of Gmail invitations directly from UiPath StudioX.

Ensure that the email content is dynamically generated based on the information extracted from the Excel file.

Error-Free Processing:

Implement robust error-handling mechanisms to address potential issues during data extraction, document generation, or email sending.

Minimize the possibility of errors to ensure a reliable and consistent automation process.

User-Friendly Automation:

Develop an automation solution in UiPath StudioX that is user-friendly, allowing non-technical users to easily understand and execute the automation process.

Provide a clear and intuitive interface for users to interact with the automation, including any necessary input or decision-making points.

Time and Resource Efficiency:

Significantly reduce the time and effort required for the invitation generation process compared to manual methods.

Optimize resource utilization by automating repetitive tasks, allowing human resources to focus on more strategic and value-added activities.

Email Personalization:

Ensure that each email invitation is personalized based on the individual's information from the Excel file.

Include specific event details, making the invitations more engaging and relevant to recipients.

Scalability:

Design the automation process to be scalable, accommodating changes in the size of the Excel dataset or modifications to the Word template.

Ensure that the solution can easily adapt to future adjustments in the invitation generation or email sending process.

Reliable Gmail Integration:

Establish a secure and reliable connection with Gmail to send invitations seamlessly.

Consider factors such as authentication, security, and any potential restrictions imposed by Gmail.

Documentation and Reporting:

Generate comprehensive documentation that outlines the automation process, including steps, logic, and any configuration details.

Implement reporting mechanisms to track the success of each automation run, providing insights into the overall performance.

Compliance and Security:

Ensure compliance with data protection regulations and security standards during data handling and email transmission.

Implement secure practices to safeguard sensitive information throughout the automation process.

These automation objectives collectively aim to streamline the invitation generation and distribution process, enhancing efficiency, accuracy, and user accessibility within UiPath StudioX.

No.	KPI Name	Description
1	*Processing Time*	*Target a significant decrease in overall processing time compared to the manual process.*
2	Error Rate	Aim for a low error rate to ensure the reliability of the automated solution.
3	Throughput	Increase throughput to demonstrate efficiency in handling a large volume of invitations.
4	User Satisfaction	Seek high user satisfaction scores, indicating that non-technical users find the automation process intuitive and beneficial.
5	Email Delivery Rate	Ensure a high email delivery rate, indicating that invitations reach the intended recipients without issues.

1.4 Key Contacts

Role	Name	E-Mail	Phone-Nr.	Notes
RPA Developer	Gauca Tudor	tudor.gauca03@e-uvt.ro	….	
RPA Developer	Diaconescu Luciano	Luciano.diaconescu02@e-uvt.ro		

1.5 Minimum Pre-requisites for the Automation

1. *Filled in Process Definition Document*

2. *Credentials required to log in to applications*

3. *Network drive/file location access*

2 AS IS Process description.

2.1 Process Overview

The section contains general information about the process before automation.

#	Item	Description
1	**Process full name**	*Gestionarea Distribuției Invitațiilor UVT*
2	**Process Area**	Computer Science
3	**Department**	*Computer Science*
4	**Process short description**	*The process encompasses data extraction from an Excel file, dynamic completion of Microsoft Word invitation templates, and automated sending of Gmail invitations.*
5	**Role(s) required for performing the process**	*RPA Developer*
6	**Process schedule and frequency**	*Almost Daily*
7	**# of times processes is run/month**	*20+*
8	**Process execution time**	*5 minutes*
9	**Average handling time per item**	*1 minutes*
10	**Peak period (s)**	*N/A*
11	**Total # of FTEs supporting this activity**	*2 persons*
12	**# of Person performing the process**	*1 person*

13	Expected Volume increase during next periods	N/A
12	Level of exception rate	60%
13	Input data description	Gmail, Event, Date, Location
14	Output data description	Microsoft File
15	Dependencies	Gmail, UVT Account

2.2 Applications Used

The table includes a comprehensive list all the applications that are used as part of the process automated, at various steps in the flow.

#	Application name	Version	Ownership (external/ internal)	Login Module	Interface	Environment/ Access method	Comments (Include URLs)	Goal
1.	*Excel*	*…*	*External*	*Grant Access*	*…*	*…*	*Used to generate Excel reports*	*…*
2.	*Google Chrome/Microsoft Edge*	*…*	*External*	*Grant Access*	*…*	*…*	*Used to access web pages from where the process can access the documents*	*…*
4.	*Gmail*	*…*	*External*	*Grant Access*	*…*	*…*	*Used to send emails in case of not finding a claim*	*…*

2.3 AS IS Process Map / Process chart.

2.3.1 High Level Process Map

Process diagram (https://app.diagrams.net/)
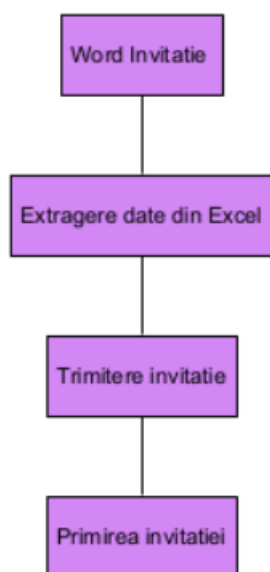
Figure 1. Process Map Diagram of …

2.3.2 Detailed as Is Process Actions / Process Description

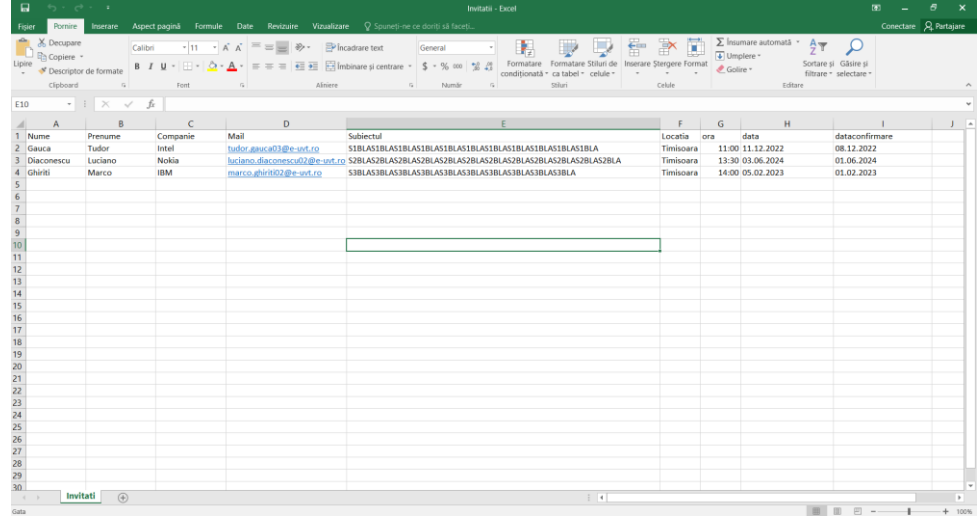| Step	Short Description of Key Process Steps	Screenshot	AVG TAT
1.	*Microsoft Word File Invitation for one Individual after extracting the excel data*	Subiect: S2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLA Dragă Diaconescu Luciano, Te invităm cordial să participi la evenimentul nostru special. Detalii eveniment: - Data: 03.06.2024 - Ora: 13:30 - Locație: Timisoara Ne-ar face o deosebită plăcere să avem onoarea să te avem printre invitați. Te rugăm să confirmi participarea până la data de 01.06.2024. Cu respect, Nokia	

| 2. | *Gmail with Invitation* | | |
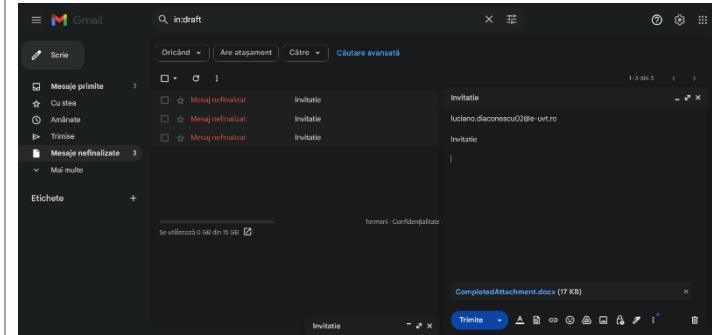
3   TO BE Process description
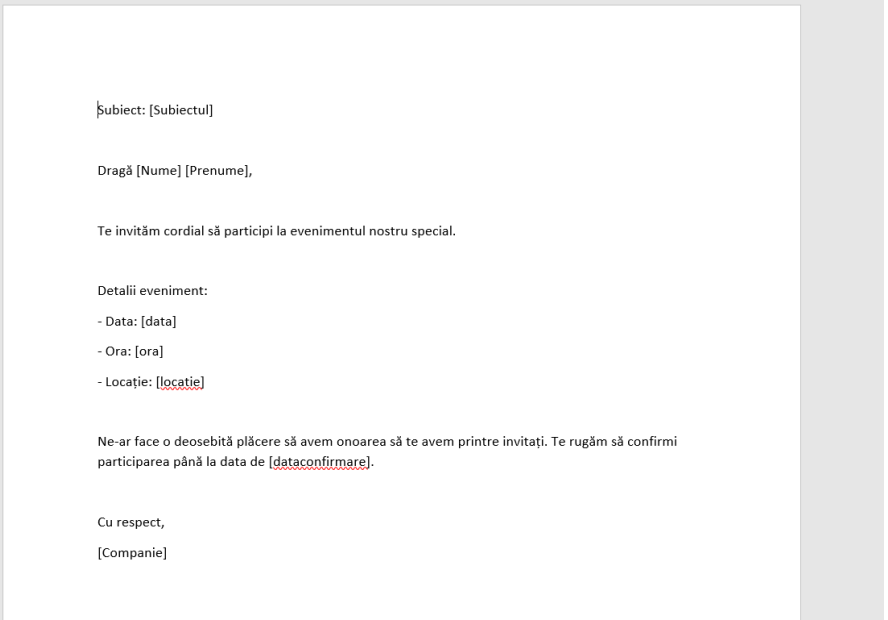
3.1   Detailed TO BE Process Map (with Screenshots)

Detailed Process diagram (https://app.diagrams.net/) based on 2.3.2 Detailed as Is Process Actions / Process Description
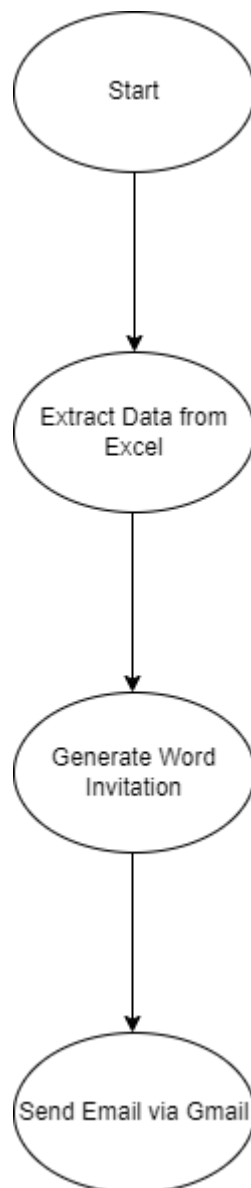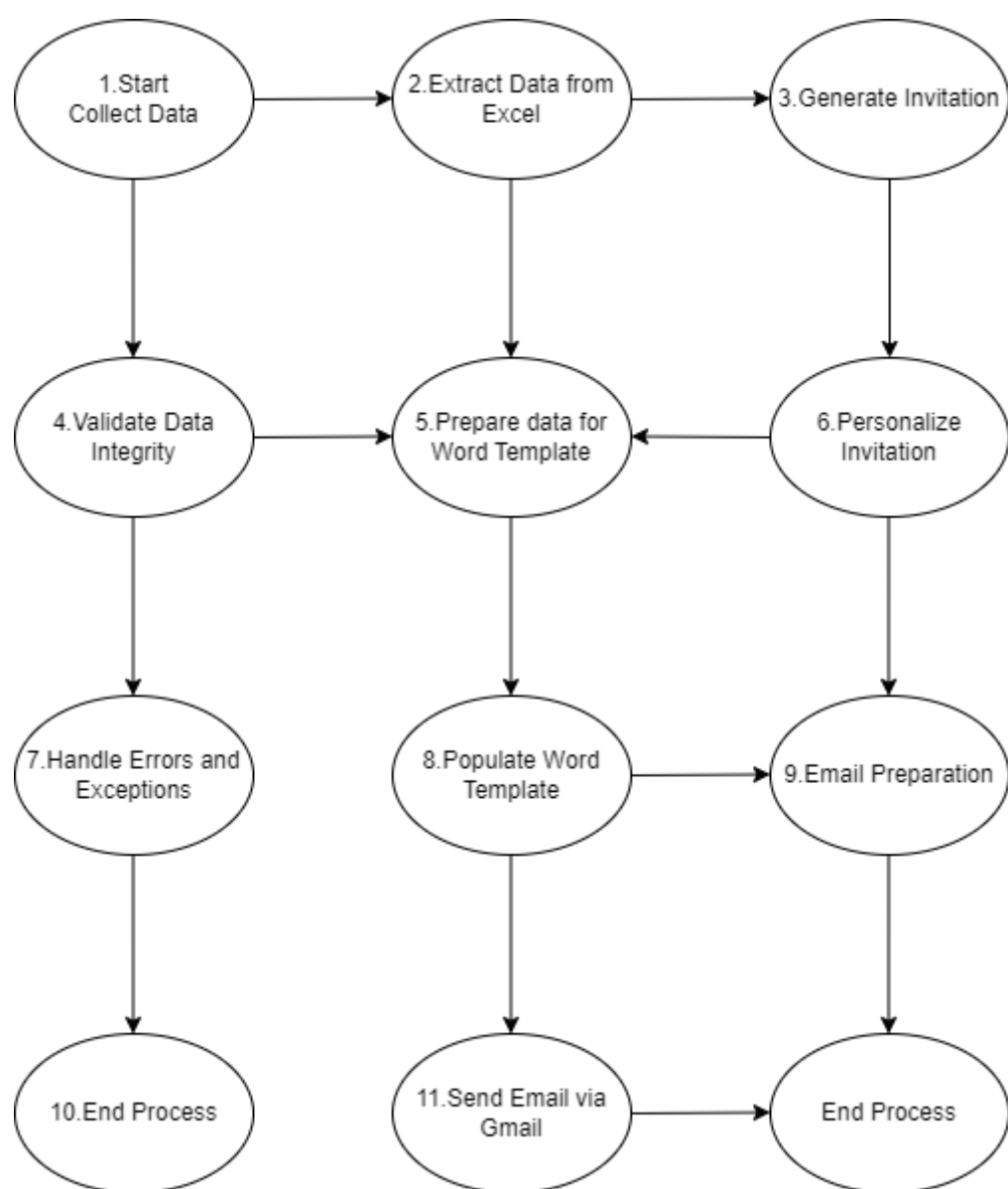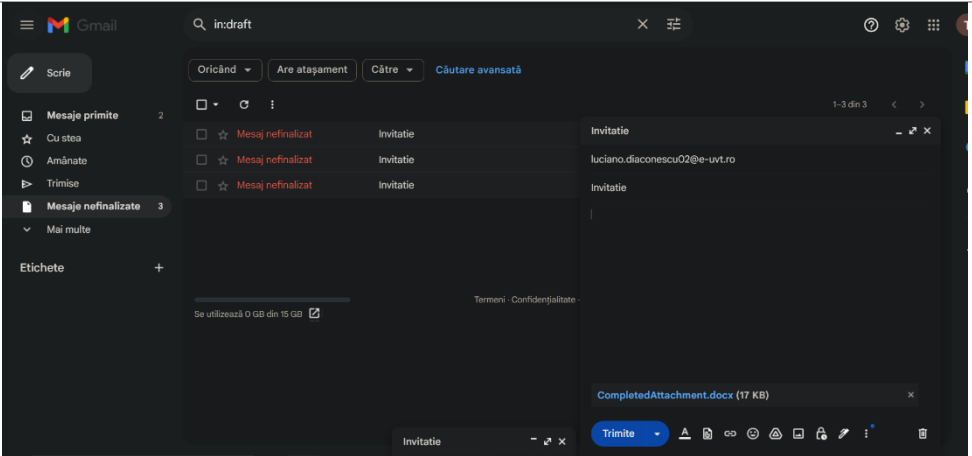
Nr.	Description	Screenshot
1.	**Collect Data Requirements.** *Begin the process by gathering the necessary data requirements for the invitations. This involves understanding the information needed from the Excel file to personalize the invitations.*	*#N/A*
2.	**Extract Data from Excel.** *Use UiPath StudioX to extract relevant data from the Excel file. This includes recipient names, event details, and any other information required for the invitations.*	

3.	**Generate Invitation in Word** *Once the data is extracted, move on to generating the Word invitation templates. This involves creating a template in Microsoft Word that will be dynamically populated with data for each recipient.*	Subiect: [Subiectul] Dragă [Nume] [Prenume], Te invităm cordial să participi la evenimentul nostru special. Detalii eveniment: - Data: [data] - Ora: [ora] - Locație: [locație] Ne-ar face o deosebită plăcere să avem onoarea să te avem printre invitați. Te rugăm să confirmi participarea până la data de [dataconfirmare]. Cu respect, [Companie]
4.	**Validate Data Integrity.** *Implement a validation step to ensure the integrity of the extracted data. Check for any inconsistencies or errors in the data before proceeding further.*	#N/A
5.	**Prepare Data for Word Template.** *Preprocess the data to make it suitable for populating the Word template. This may involve*	#N/A

	formatting, organizing, or transforming the data to align with the template structure	
6.	**Personalize Invitation.** *Utilize UiPath StudioX to personalize each invitation by dynamically populating the Word template with the processed data. This ensures that each invitation contains accurate and personalized information for the intended recipient.*	#N/A
7.	**Handle Errors and Exceptions.** *Implement error-handling mechanisms to address any issues that may arise during data extraction, template generation, or personalization. This step is crucial for maintaining the reliability of the automation process.*	#N/A

| 8. | **Populate Word Template.**

 Use UiPath StudioX to populate the Word template with the processed data. Ensure that the template is correctly filled out for each recipient based on the personalized information. | Subiect: S2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLAS2BLA

 Dragă Diaconescu Luciano,

 Te invităm cordial să participi la evenimentul nostru special.

 Detalii eveniment:
 - Data: 03.06.2024
 - Ora: 13:30
 - Locație: Timisoara

 Ne-ar face o deosebită plăcere să avem onoarea să te avem printre invitați. Te rugăm să confirmi participarea până la data de 01.06.2024.

 Cu respect,
 Nokia |
| 9. | **Email Preparation.**

 Prepare the email content within UiPath StudioX, incorporating the personalized invitations. This involves creating a draft email that will be sent to | #N/A |

	each recipient containing their specific event details.	
10.	**Send Email via Gmail.** *Utilize UiPath StudioX to send the prepared emails via Gmail. Ensure that the emails are correctly addressed to each recipient and that the attachments (Word invitations) are included.*	

3.2 Out of Scope for RPA

Activity/Action	Reason for out of scope	Impact on the TO BE	Possible measures to be taken into consideration for future automation
No internet connection	*The automation process heavily relies on internet access for accessing the UVT Portal and sending documents.*	*Inability to access the UVT Portal and send documents, leading to process interruptions.*	***Internet Connection Monitoring:*** • *Implement a mechanism within the automation process to monitor the internet connection status.* • *If the connection is lost, the process should be designed to enter a waiting state, periodically checking for the restoration of internet connectivity.* *.*
Credentials Changed	*Changes in credentials can lead to authentication failures and hinder the robot's ability to log in and download documents..*	*Inability to log in to the UVT Portal, resulting in a breakdown of the automation process.*	***Credential Management System:*** • *Implement a secure credential management system that separates credentials from the automation workflow.*

			• *Store credentials in a secure vault or orchestrator, allowing for easy updates without disrupting the auto-mation process.*
Change the structure and column name of excel	*Modifications in the Excel structure or column names can affect the robot's ability to identify and process data accurately.*	*The robot may fail to identify columns, leading to errors in the automation process.*	**Dynamic Column Identification:** • *Design the automation process to dynamically identify columns based on their content rather than fixed na-mes.* • *Utilize techniques such as searching for specific content or using column headers' relative positions.* .
Values added into excel	*The robot assumes that values in Excel are correct without conducting checks.*	*The robot may process incorrect values, potentially leading to inaccurate results.*	**Data Validation Rules:** • *Establish data validation rules within the Excel file itself.* • *Define and enforce rules that restrict the entry of incorrect or inconsistent values, ensuring data quality.*

Missing, wrong, or incomplete values added to the config file	*The presence of inaccurate or incomplete values in the configuration file can lead to errors or unexpected behavior in the automation process.*	*The robot may fail to execute tasks correctly, leading to process disruptions or incorrect outcomes.*	***Config File Validation:*** • *Implement a validation mechanism for the configuration file.* • *Design the automation process to verify the integrity and completeness of values within the configuration file before execution.*

3.3 Error & Exceptions Handling (RPA Software & Applications)

(Example) Below are the exceptions taken into consideration during program execution.

System Exceptions:

1. **Config File Inaccessibility:**

   - *Description: The automation process verifies the accessibility of the configuration file containing crucial settings for the invitation generation.*

   - *Handling: If the config file cannot be accessed or does not exist, the robot raises a system exception, logs the issue, and pauses execution for manual intervention.*

2. **No Internet Connection:**

   - *Description: Regularly checks for an active internet connection, essential for accessing the UVT Portal and sending emails.*

   - *Handling: If no internet connection is detected on the VM, the robot triggers a system exception, logs the issue, and attempts to reconnect periodically.*

3. **Application Unresponsiveness (Word, Excel, Gmail):**

   - *Description: Monitors the responsiveness of critical applications (Word, Excel, and Gmail) during the invitation generation process.*

   - *Handling: If any of these applications are not responding, the robot raises a system exception, logs details, and may attempt a restart or notify support teams.*

4. **UVT Portal Unavailability:**

   - *Description: Checks the UVT Portal's responsiveness to ensure successful data extraction.*

   - *Handling: If the UVT Portal is not responding, the robot logs a system exception, pauses execution, and may notify relevant teams for investigation.*

5. **Folder Locations Not Found:**

   - *Description: Verifies the existence of folders where completed Word invitations and Excel reports are expected to be saved.*

   - *Handling: If the specified folders are not found, the robot raises a system exception, logs details, and may notify relevant stakeholders.*

Business exception:

1. **Excel File Name Changes:**

   - *Description: Monitors the expected names of Excel files containing event data.*

- *Handling: If the names of Excel files have been changed, the robot raises a business exception, logs the event, and pauses execution for manual review.*

2. **Modified or Expired Gmail Credentials:**

   - *Description: Regularly checks the validity and correctness of Gmail credentials for sending invitations.*

   - *Handling: If Gmail credentials are modified or expired, the robot triggers a business exception, logs the issue, and notifies the RPA Team for credential updates.*

Other

3.4   Additional sources of process documentation

Additional Process Documentation		
Video Recording of the process	*#N/A*	*Insert any relevant comments*
Business Rules Library (Optional)	*#N/A*	*Insert any relevant comments*
Other documentation (Optional)	*#N/A*	*Insert any relevant comments*
Standard Operating Procedure(s) (Optional)	*#N/A*	*Insert any relevant comments*
High Level Process Map (Optional)	*#N/A*	*Insert any relevant comments*
Detailed level process map (Optional)	*#N/A*	*Insert any relevant comments*
Work Instructions (Optional)	*Done*	*Version 1 – 01.01.2024*
Input Files (Optional)	*#N/A*	*Insert any relevant comments*
Output Files (Optional)	*#N/A*	*Insert any relevant comments*