VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belgaum - 590014

A Mini Project Report
On
"AUTOMATIC CERTIFICATE GENERATOR"

Submitted by

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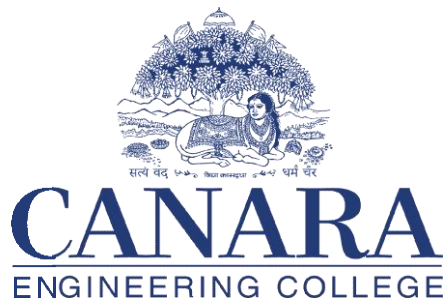**Sandeep (4CB20IS046)**

Under the Guidance of

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Department of Information Science and Engineering

CANARA
ENGINEERING COLLEGE

Canara Engineering College
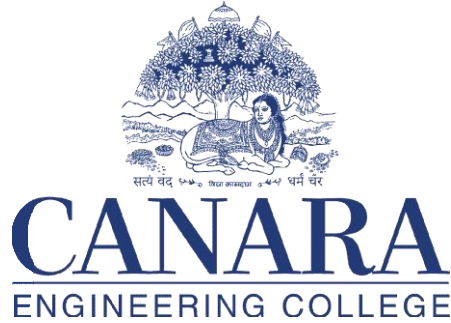**Benjanapadavu – 574219**
2021-2022

CANARA ENGINEERING COLLEGE

Benjanapadavu -574219

2021-2022

Department of Information Science and Engineering

CERTIFICATE

This is to certify that the mini project work entitled "**AUTOMATIC CERTIFICATE GENERATOR**" is a bonafide work carried out by **Meghashree Kamath** bearing USN **4CB20IS029**, **Varshini R Nayak** bearing USN **4CB20IS061** & **Sandeep** bearing USN **4CB20IS046**, the bonafide students of **Canara Engineering College** during the year 2021-2022. It is verified that all corrections/suggestions indicated for internal assessment have been incorporated in the report.

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ABSTRACT

This is a QDB (Quick Deployable Bot).

Use Case: Certificate generation for events like trainings, workshops, events take too much manual effort and time. Non-value added, repetitive, non-skill enhancing job for employees. Solution: Digital Robot to generate digital certificate for any and every type of event(s). Automatically sends personalized email to participants / admins, as needed.

Plug and play enabled, custom config possible – needs zero technical skill.

This takes in data from an excel sheet and replaces the required variables in a designed certificate template in the word format. Hence the automatically generated certificates are stored in pdf, word and image formats as well. This also sends personalized emails directly to the recipients/ participants along with their respective pdf formatted certificates.

ACKNOWLEDGEMENT

A successful and satisfactory completion of any significant task is the outcome of valuable aggregate combination of different people in radial direction explicitly and implicitly. We have been lucky to have received a lot of help and support from our lecturers during the making of this mini project, we would therefore take the opportunity to thank and express our gratitude to all those without whom the completion of our mini project would not be possible.

We owe a great thanks to Principal **Dr. Ganesh V Bhat**, for providing his kind support and cooperation.

We are extremely grateful to **Dr. Jagadisha N**, Head of Information Science & Engineering Department for his moral support and encouragement.

We consider its privilege and honour to express our sincere gratitude to our mini project guide **Mrs. Shilpa B** and **Mr. Ajith Kumar B P** for guiding and improving our knowledge towards this work.

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INTRODUCTION

Everything is moving online in this Digital World, whether it's education, training, or office work. We have seen Learning & Development departments within organizations spend countless hours creating certificates and disseminating them to all students. Many academic institutions still do this work by hand.

We have developed this Bot to help the organizations solve that specific problem while saving hundreds of manual hours.

The activities included in the package are as follows:

Word Template - can be customised or uploaded by you, but the file name must remain the same.

Excel List - A file containing the information for all participants for whom certificates must be generated and distributed via individual emails.

Features of this project are:

1. Customize, generate & distribute any number of Certificates without any manual work.
 2. Save hundreds of manual hours.

CHAPTER 2

DESIGN AND IMPLEMENTATION

Design and create a required certificate template (Figure 2.1) in MS Word and save it in the required location in the computer. Include the variables to be replaced in the template. Here the variables to be replace are "StudentName", "Number", and "EventName" with the participants' name, prize won and the event respectively.
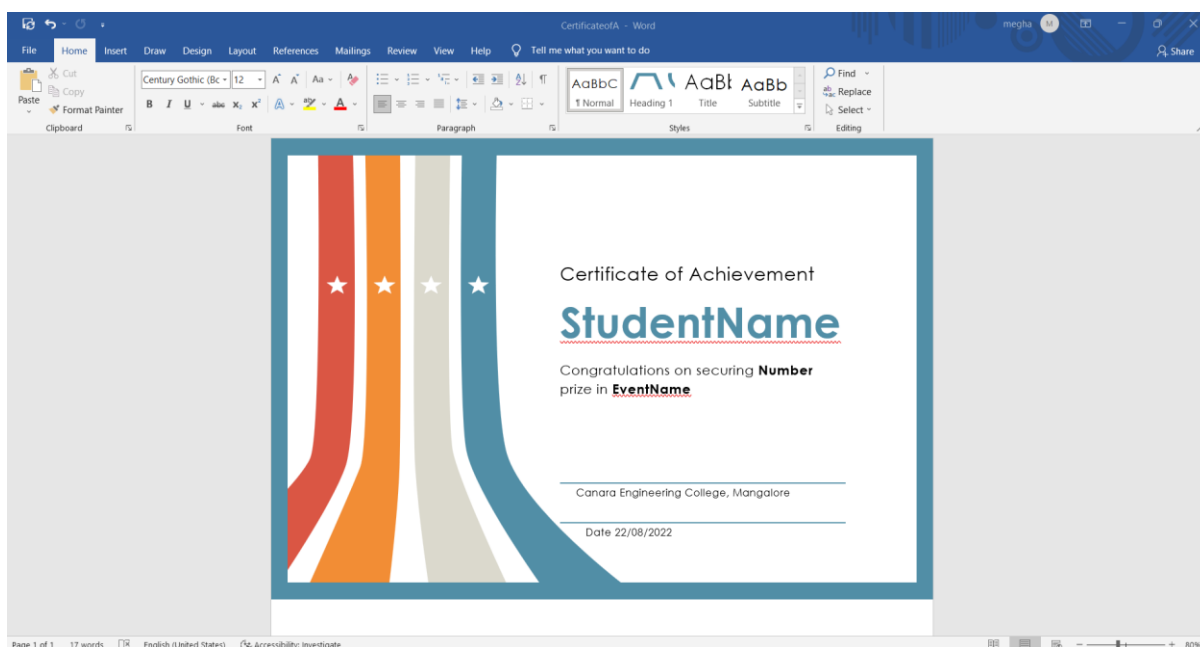

Figure 2.1: Creating a word template

Create an excel sheet including all the necessary credentials row wise (Figure 2.2) and format as required that needs to be replaced in the certificate template. Here we have included student name as StudentName, prize won as Prize, event name as EventName and their mail id as mail, and have filled their respective details.

Save the excel file in the required location. Here the excel sheet is saved as "data.xlsx".

Figure 2.2: Excel sheet

Steps to follow to create the bot in UI Path:

Step 1: Create a new process called "Generate Certificate". Open the Main Workflow. Now to read the data from the excel sheet, drag and drop "Excel Application Scope" from the Activity panel. Give the path of the excel file name in quotes (Figure 2.3).
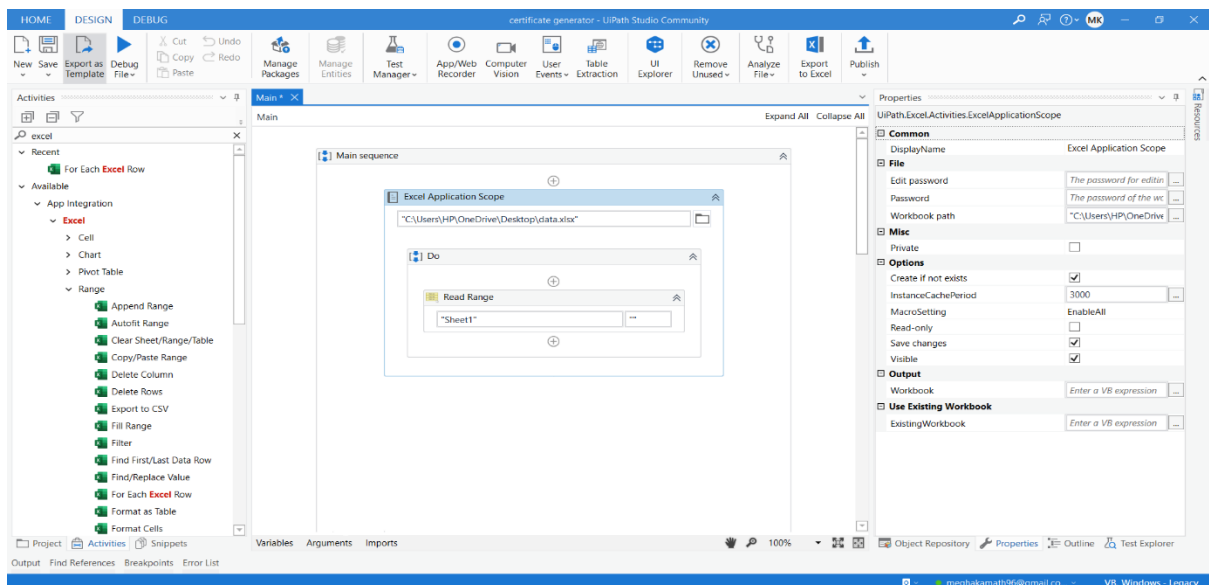

Figure 2.3: Excel Application Scope and Read Range activity

To read the data, drag and drop the "Read Range" activity. In the property panel give the sheet name as "Sheet 1" and to read the complete excel sheet keep the range as blank.

Step 2: Create a variable (here "dtstudentdata") in the properties window or variable pane; as the read range provides data in the format of data table. Also give the scope as Main sequence so that it can also be accessed outside the Excel Application Scope (Figure 2.4).
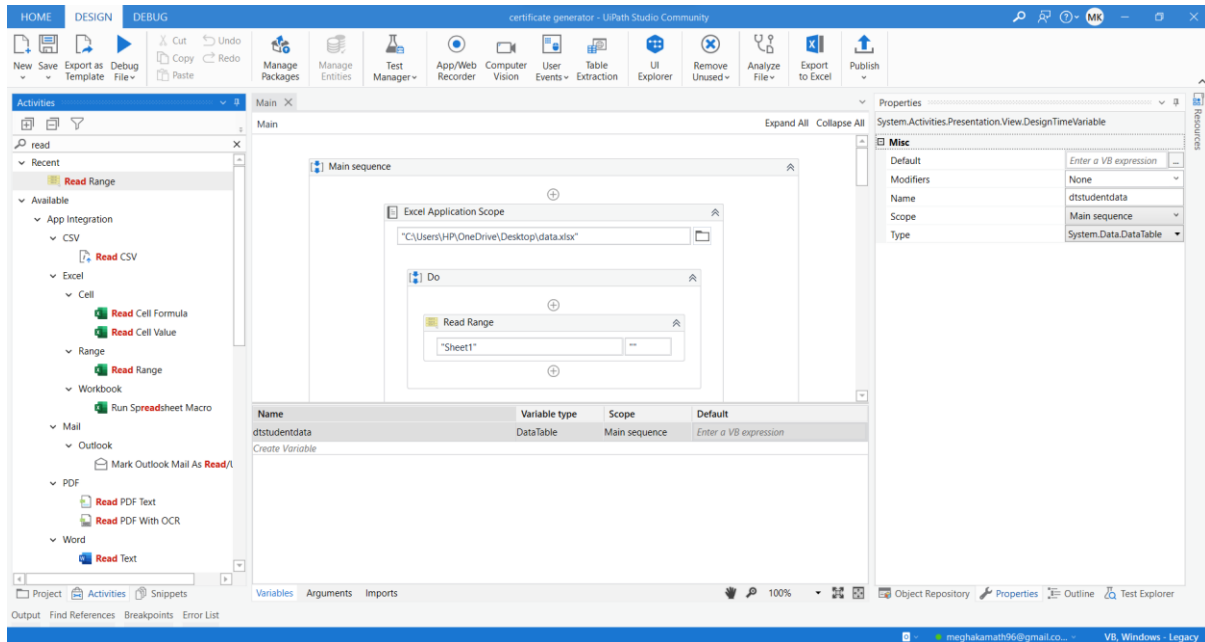

Figure 2.4: Creating variable

Step 3: To create certificate for all the students in the data table, row by row, drag and drop the "For Each Row" from the Activity panel. Give the command for each row in dtstudentdata.

Create a copy of the template file and then make changes in it for each of the rows. For that create a new folder called "print". Drag and drop the "Copy File" activity into the For Each loop.

Copy the certificate file to the source section and print folder to the destination section. To give a unique name for each file in destination, concatenate 'row("StudentName").ToString' to it along with the .docx extension (Figure 2.5).
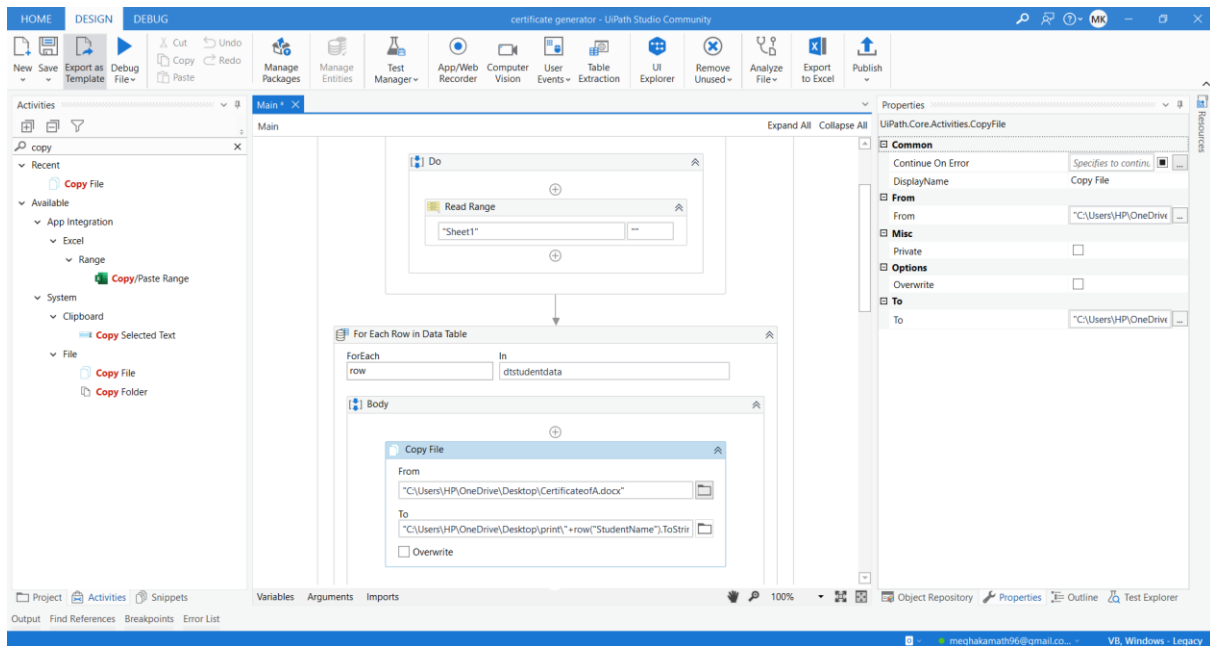
Figure 2.5: For Each Row & Copy File activity

Step 4: Drag and drop "Word Application Scope" into the workflow and provide the same destination path as given in the previous step.

Step 5: Now to replace the text inside the word document, drag and drop "Replace Text in Document". Give the 'Search for' string from the certificate template and 'Replace with' string from the excel sheet (Figure 2.6).
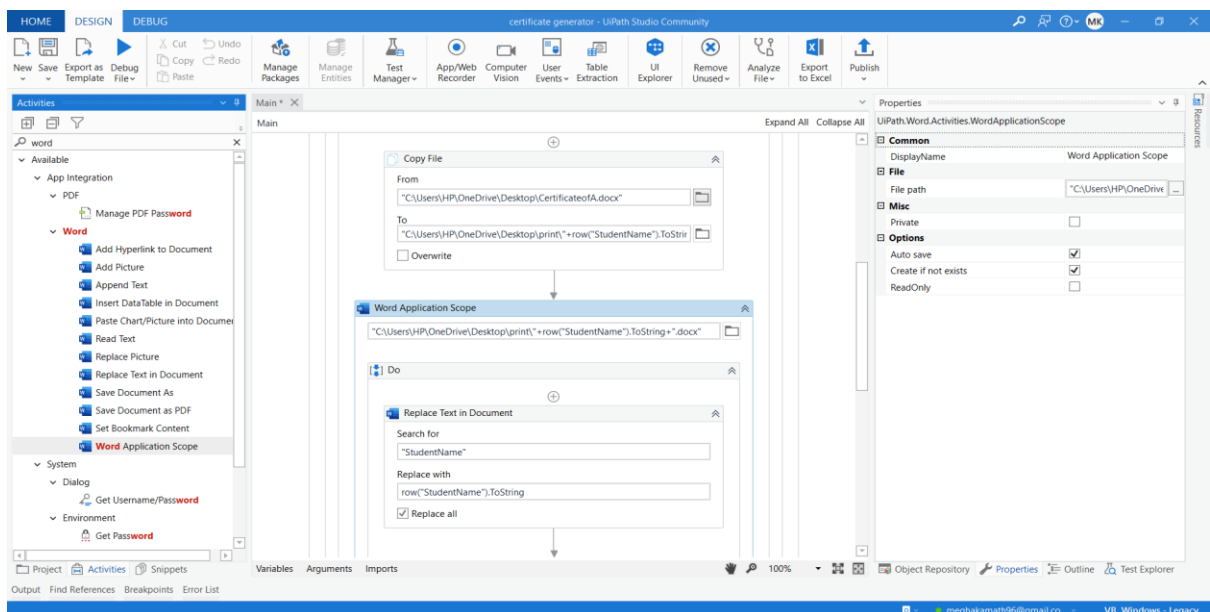

Figure 2.6: Replacing text in Word Application Scope

Step 6: Repeat step 5 for StudentName, Number and EventName (Figure 2.7).
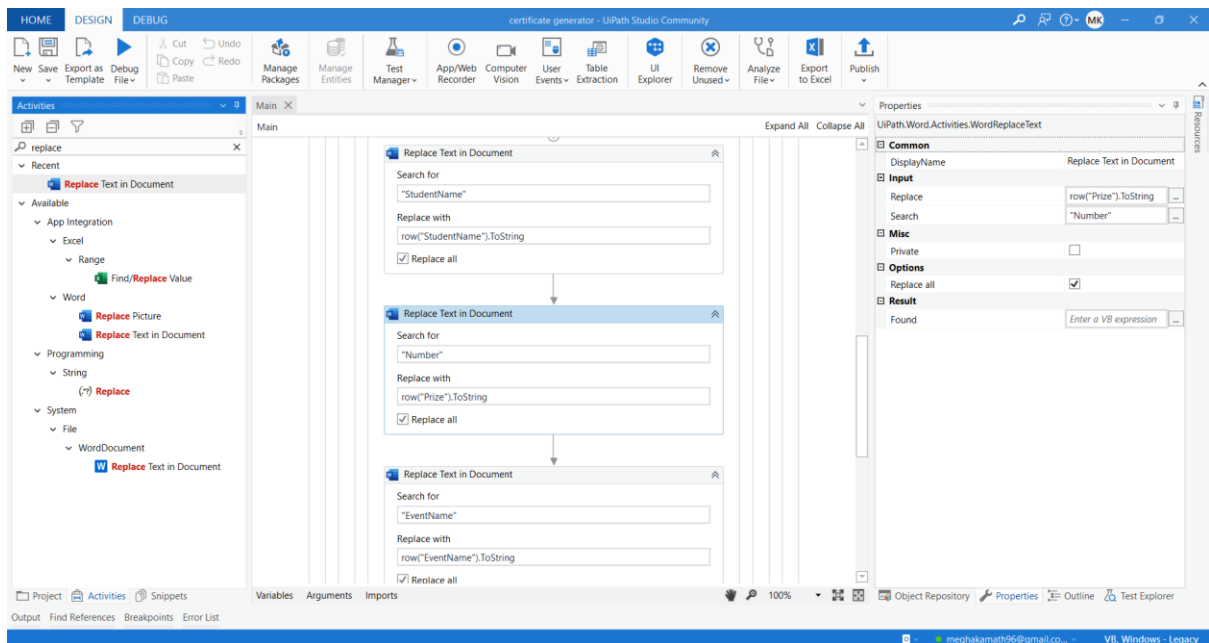

Figure 2.7: Replacing Text in Document

Step 7: To save the file as pdf, drag and drop "Save Document as PDF" into the workflow and give the same destination path but with .pdf extension(Figure 2.8).
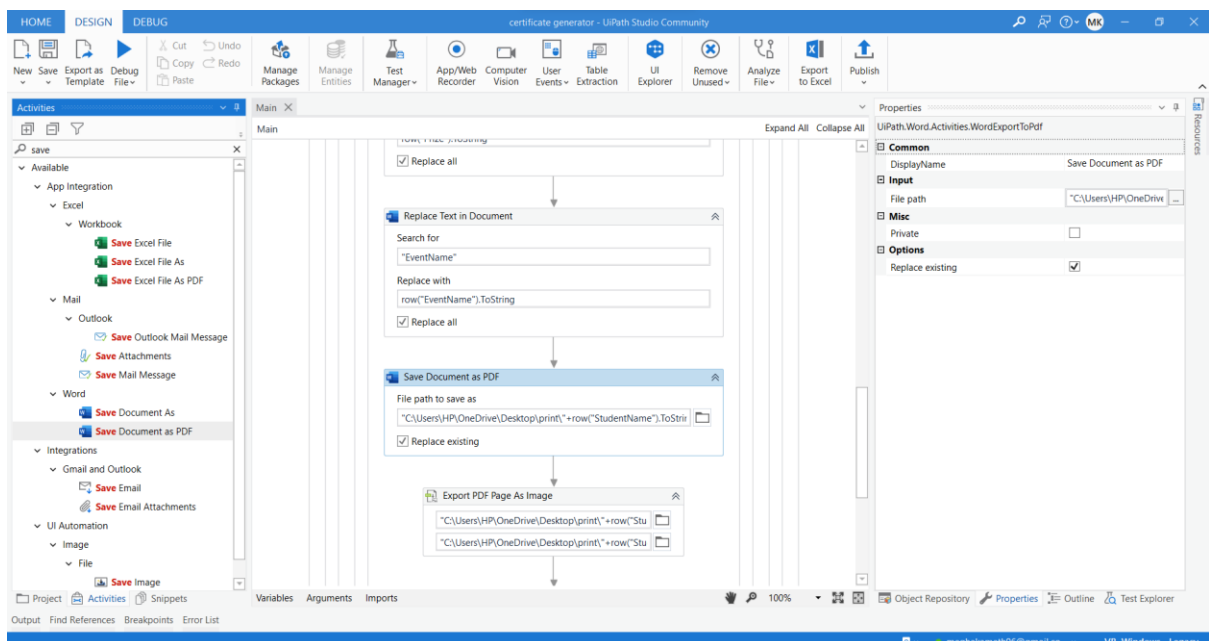

Figure 2.8: Saving Document as PDF

Step 8: Drag and drop the "Export PDF Page as Image" activity (Figure 2.9) to the workflow to save the file as image. Give the source path of the pdf from the print folder and the destination path as same but with .jpg extension.

This saves all the image, word and pdf formats of the generated certificate in a single print folder.
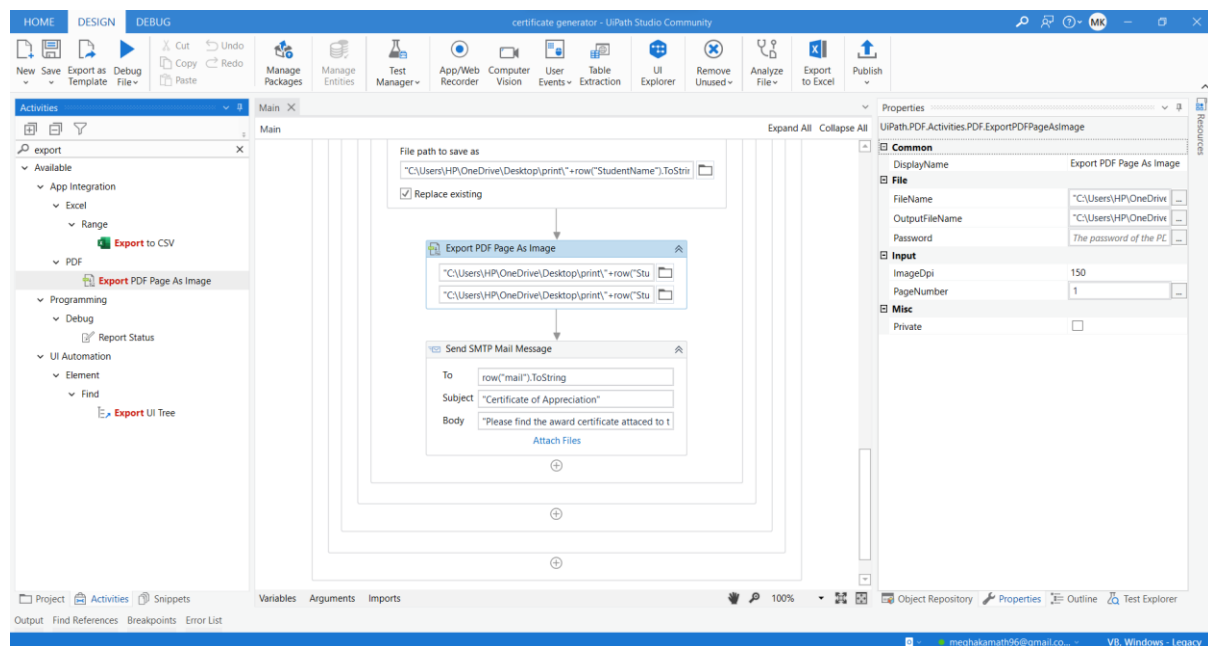

Figure 2.9: Exporting pdf as image

Step 9: To send the generated certificate to the respective students through email, drag and drop "Send SMTP Mail Message" activity.

Provide the email id through which you want to send the certificates along with its web password in the Logon. Also give Port as 465 and Server as "smtp.gmail.com".

In the workflow, provide the row name which has mail id in excel (here row("mail").ToString) for To; also include Subject and text in the Body as required. To attach pdf to the email, provide the path of pdf file with row name in the value column (Figure 2.10).
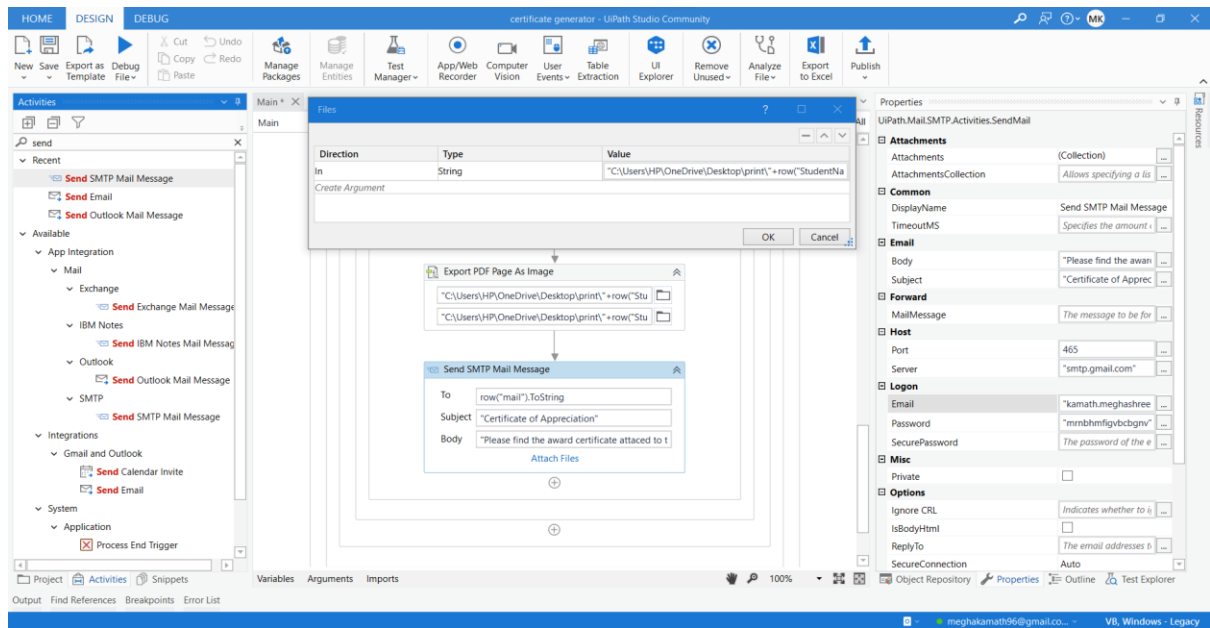
Figure 2.10: Mail message activity

Step 10: Debug the file to test and run.

CHAPTER 3

TESTING, RESULT AND ANALYSIS

The print folder contains the certificates generated in the word, image and pdf formats (Figure 3.1).
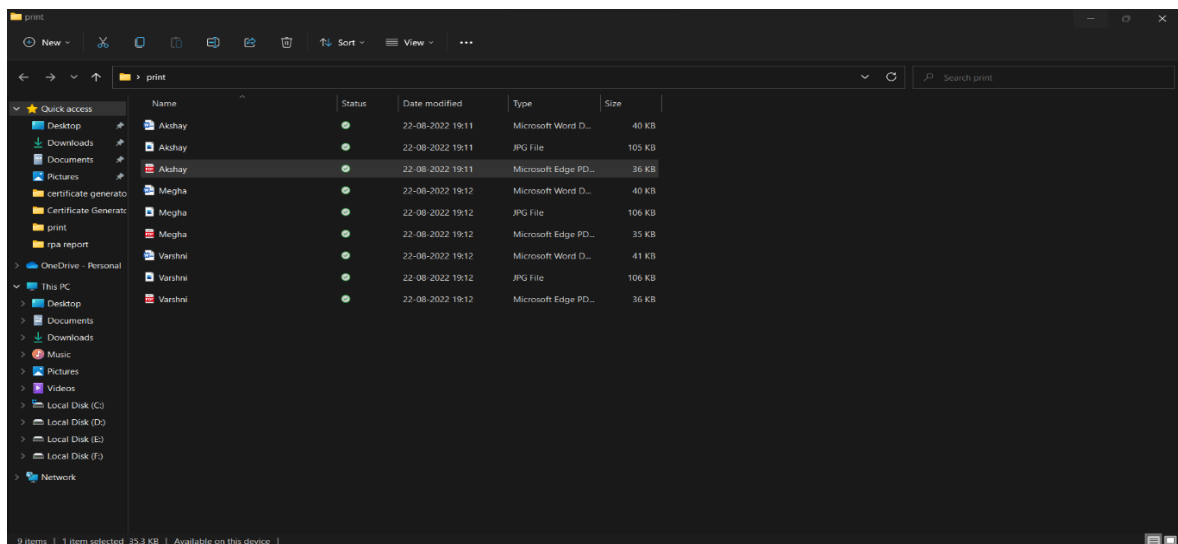

Figure 3.1: Output in the print folder

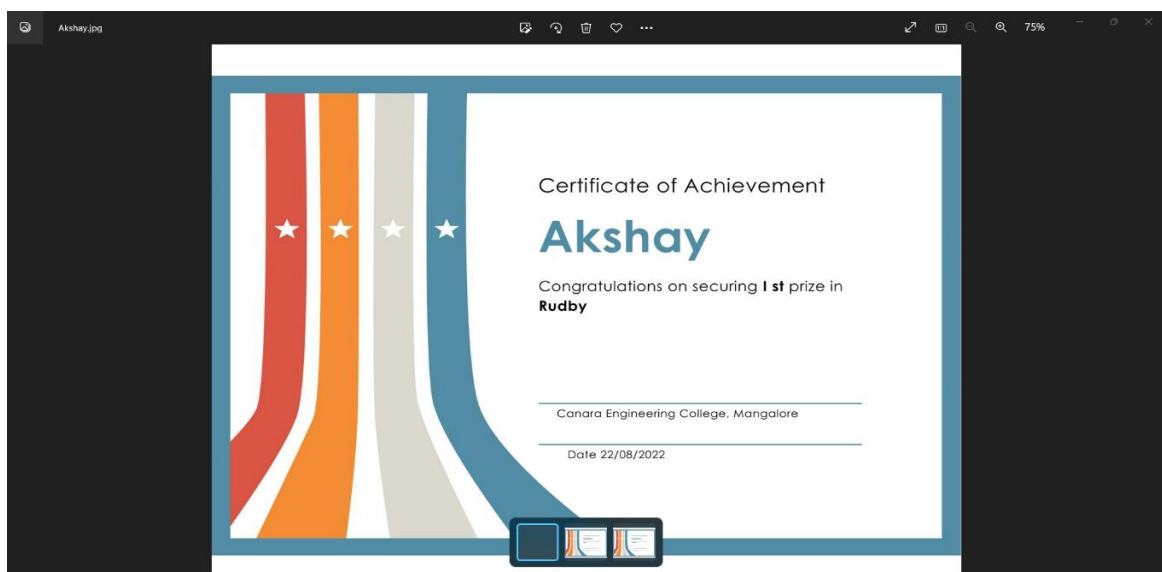The JPG format of the certificate generated (Figure 3.2)

Figure 3.2: Output in image format

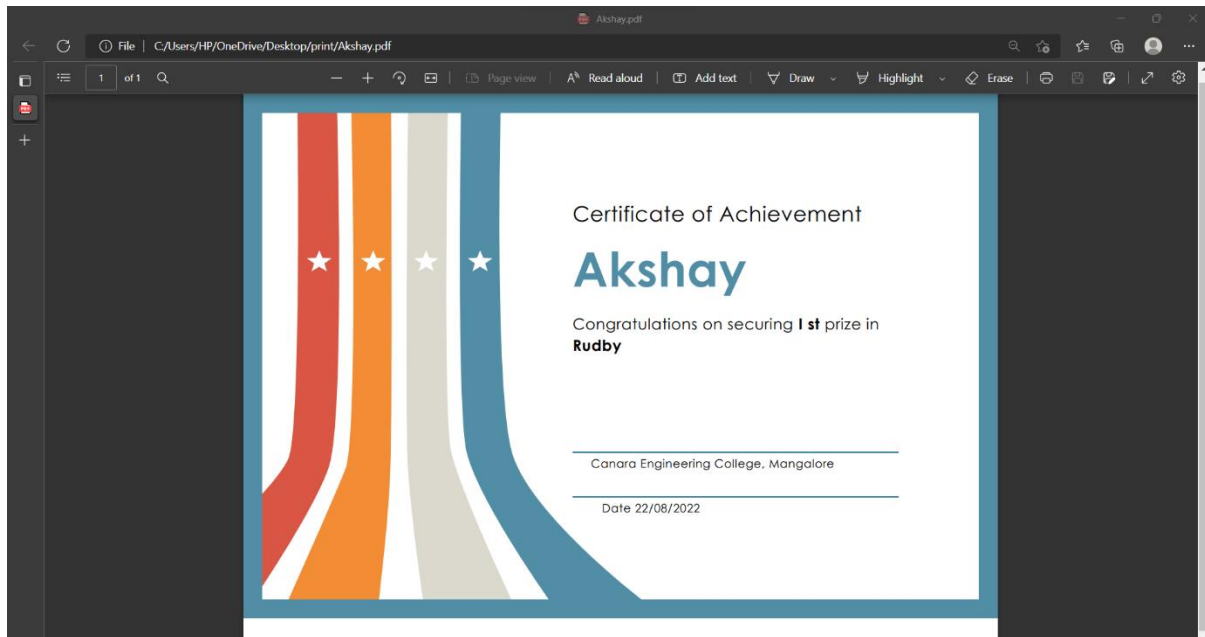The PDF format of the certificate generated (Figure 3.3).

Figure 3.3: PDF form of certificate

The snapshot of the email received by the student with the pdf file of the generated certificate (Figure 3.4)
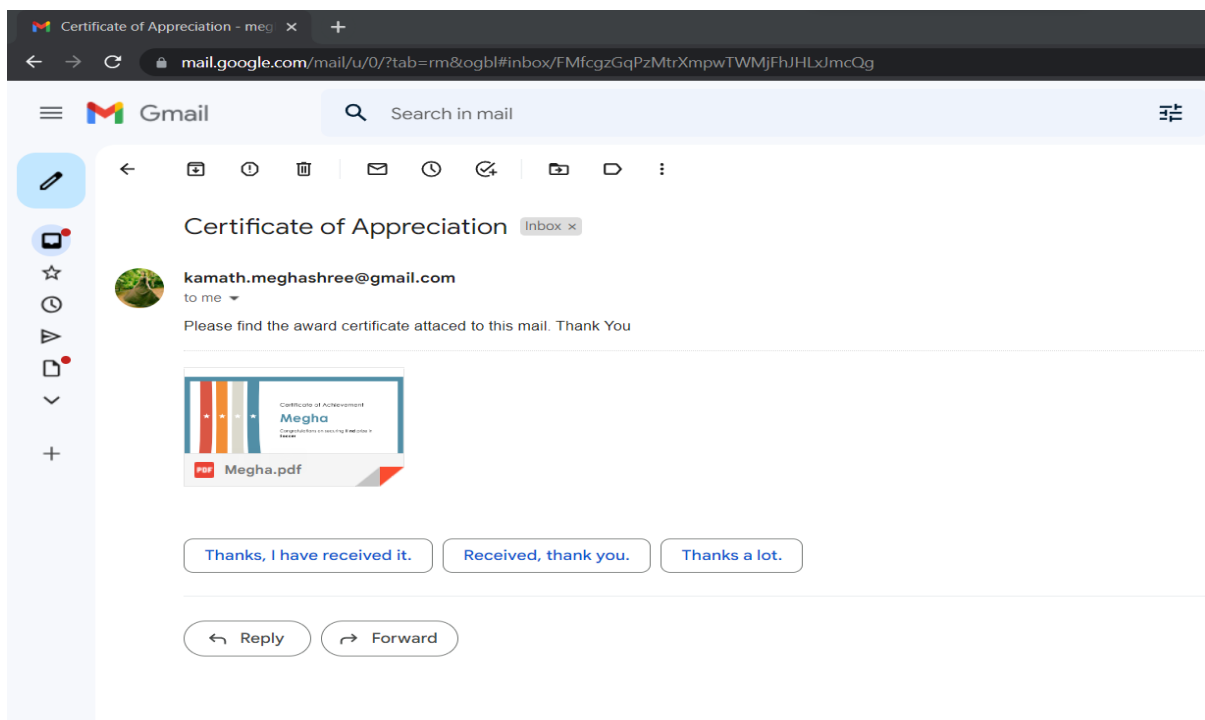

Figure 3.4: Email snapshot

CHAPTER 4

CONCLUSION

This mini project can be basically used to streamline the certificate and bulk certificate creation. One can send and store the certificates automatically without needing to manually sending it to everyone. Here it is easy to automatically generate certificates using UI Path which is one of the most popular applications available today.

This bot makes it easy to automatically generate and send certificates which can save company/ institution time and resource. Recipients also appreciate how quickly they receive their certificates via email.

Over all it is easy to design and implement this bot which is user friendly and very much efficient even for large numbers of data.

CHAPTER 5

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