# 1 INTRODUCTION

## 1.1 Overview

This project aims at developing a web based currency converter that serves the users to automate the process of converting currency.

## 1.2 Purpose

This application can automate the process of converting currencies in a given Excel file. Which results in less human effort and time consumption by improving efficiency.

# 2 LITERATURE SURVEY

Robotic process automation (RPA) emerges as a new technology which is focused on automation of repetitive, routine, rule-based human tasks, aiming to bring benefits to the organizations that decide to implement such software solution. Since RPA is a relatively new technology available on the market, the scientific literature on the topic is still scarce

## 2.1 Existing problem

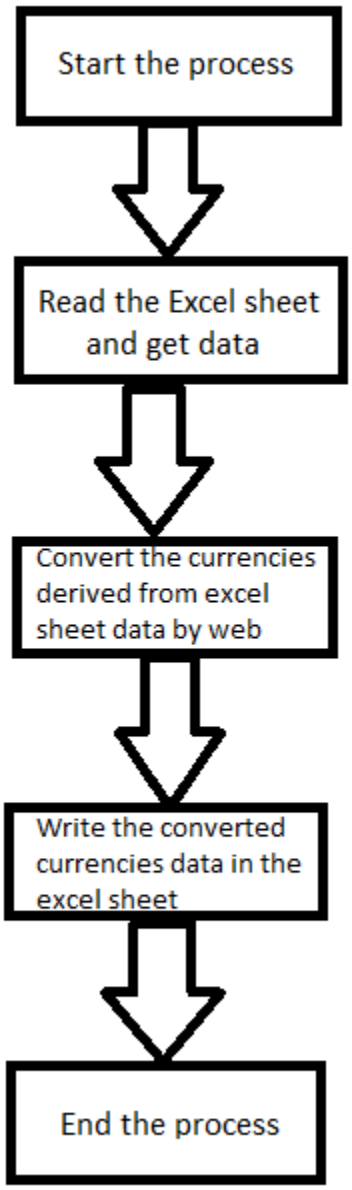
Changes in the global economy driven by the development of new technologies require businesses to become more agile and to quickly respond to the needs, wishes, and demands from their customers. Moreover, competitive and financial pressures force organizations to be more efficient, thus constantly seeking for new technologies and methodologies that would help them become more productive, save costs and add value to their business. In this Project, we are addressing a mundane task of converting currencies which is time consuming and Return on effort is not sensible in this fast paced world.

## 2.2 Proposed solution

One of the solutions which is emerging as a new technology is robotic process automation (RPA) which can replace employees on repetitive tasks and automate them, and therefore, enable employees to be involved in more complicated tasks which can bring organization more value. According to the reports of consulting companies RPA is recognized as an emerging and disruptive technology that is already delivering value

## 3 THEORITICAL ANALYSIS

### 3.1 Block diagram



## 3.2 Hardware / Software designing

**Hardware:**

- 2.0 GHz 32 or 64-bit processor
- 2 GB RAM
- At least 10 GB of available hard-disk space

- 2.0 GHz 32 or 64-bit processor
- 2 GB RAM
- At least 20 GB of available hard-disk space

- 2.0 GHz 64-bit processor
- 4 GB RAM
- At least 20 GB of available hard-disk space

- 2.0 GHz 64-bit processor
- 4 GB RAM
- Case insensitive, 1252 code page SQL Collation
- Non-clustered or clustered architecture (includes support for AlwaysOn Availability Groups)
- Allocate 10 GB Data File per connected runtime resource (minimum 100 GB)
- Allocate 5 GB Data Log File per connected runtime resource (minimum 50 GB)
- High performance disk array
- Partially contained databases are supported

**Software:**

- Windows 10 Enterprise (32-bit/64-bit) versions 1909, 2004, 20H2, 21H1
- Windows Server 2019 (64-bit)
- SQL 2016 (64-bit)
- Microsoft .NET Framework 4.8
- Microsoft Excel

# 4 EXPERIMENTAL INVESTIGATIONS

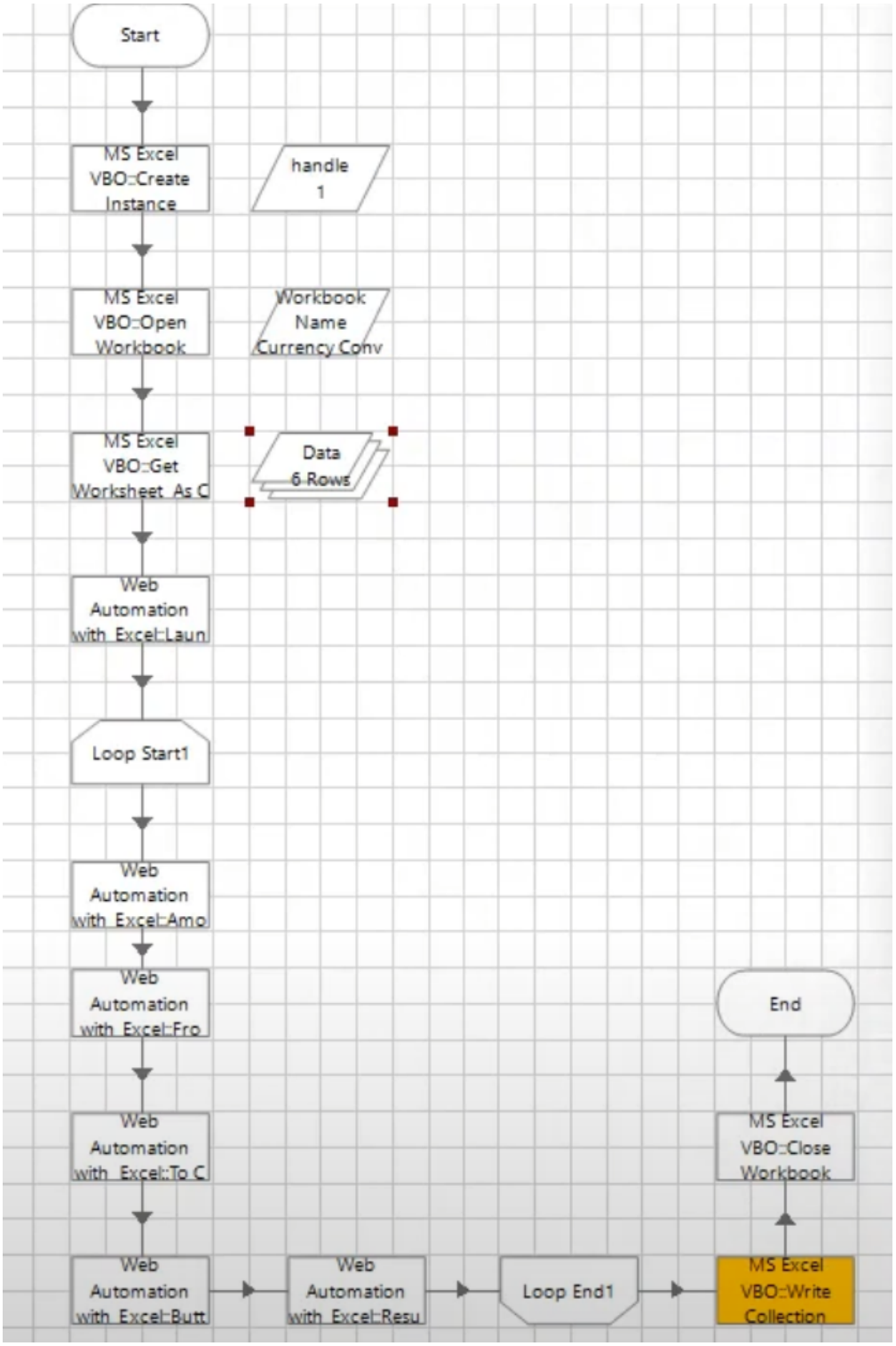
Analysis or the investigation made while working on the solution.
RPA is a software solution configured to interact with existing applications and systems the way like a human would do. RPA is an emerging technology which automates repetitive human tasks, both digital and physical, those tasks are usually error prone and therefore are suitable for automation.

Functionalities of the traditional RPA are:

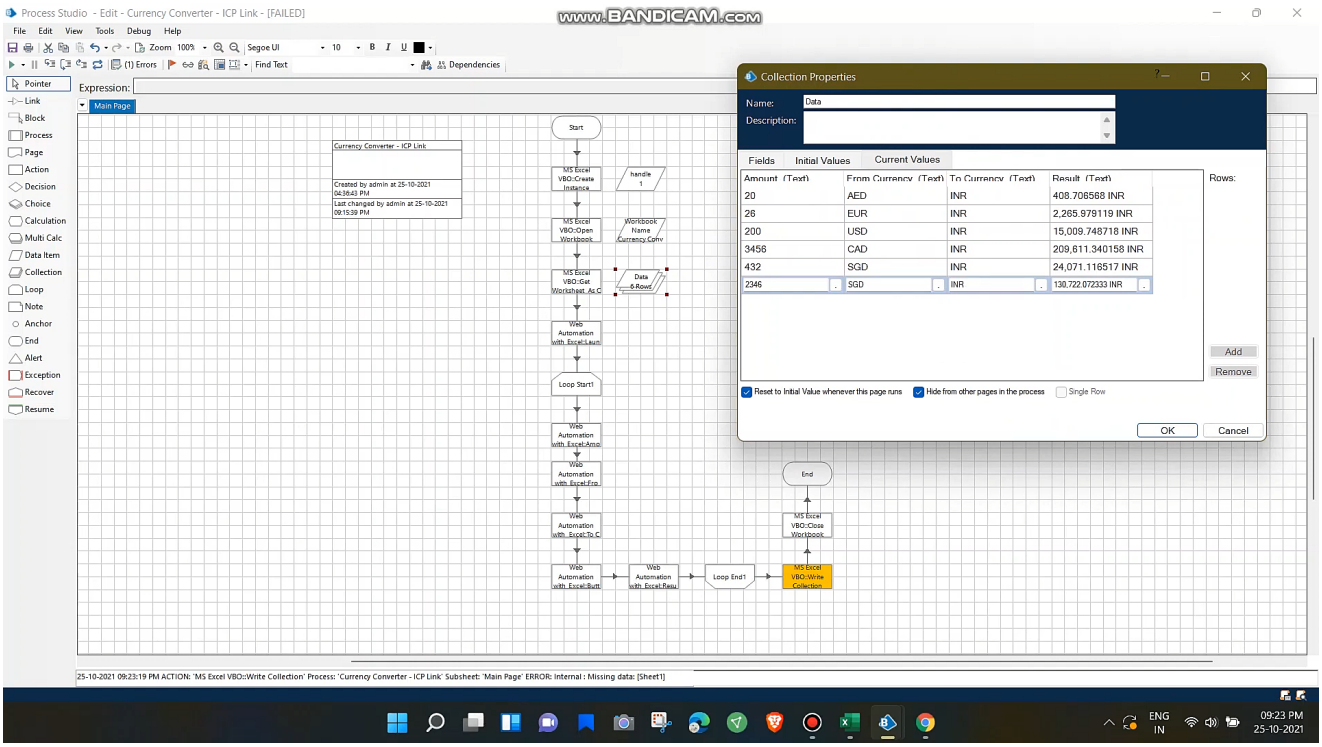
- front office (attended) automation and back office (unattended) automation,
- script based designer and visual process designer, □ the openness of the platform,
- macro recorders for process mapping, 8 □ control through coding,
- execution of automated test cases on remote machines,
- bot development and core functions,
- the control room, system management, reporting and resilience, and
- RPA analytical potential.

Recently, RPA definition is extended towards its conjunction with artificial intelligence (AI), cognitive computing, process mining, and data analytics. The introduction of advanced digital technologies allows RPA to be reallocated from performing repetitive and error-prone routines in business processes towards more complex knowledge intensive and value-adding tasks

# 5 FLOWCHART


Start
MS Excel VBO::Create Instance
handle 1
MS Excel VBO::Open Workbook
Workbook Name Currency Conv
MS Excel VBO::Get Worksheet As C
Data 6 Rows
Web Automation with Excel::Laun
Loop Start1
Web Automation with Excel::Amo
Web Automation with Excel::Fro
Web Automation with Excel::To C
Web Automation with Excel::Butt
Web Automation with Excel::Resu
Loop End1
MS Excel VBO::Write Collection
MS Excel VBO::Close Workbook
End

# 6 RESULT




# 7 ADVANTAGES & DISADVANTAGES

Advantages of RPA:

- RPA is easy to configure, so developers do not need programming skills.
- The RPA software is not invasive, it is based on existing systems, without the need to create, replace or develop expensive platforms.
- RPA is secure for the company, RPA is a robust platform that is designed to meet the IT requirements of the company in terms of security, scalability, auditability and change management.

Disadvantage of RPA:

- The automated task increases unemployment. RPA is reducing the need for human power, so it has the potential to eliminate the jobs of repetitive tasks.
- The complexity of implementation in RPA has decreased day-by-day. According to a recent study, 30 to 50 percent of the RPA project fails initially.

- The RPA project or system needs regular reconfiguration.
- It is a costly technology as compare to any other technology.
- There is a lack of technical ability in the RPA projects.

## 8 APPLICATIONS

| Industry type | Process type |
|---|---|
| Services | Recruitment (HRM services) |
| | Payroll process (outsourcing services) |
| | Financial process automation |
| | Payment receipt (outsourcing services) |
| | Process of promotion in HRM (outsourcing services) |
| | HRM, IT management, Public relations, Knowledge management (consulting services) |
| | HRM (audit, tax, and consulting services) |
| Telecommunications | Purchasing |
| | Sales (capacity check for bid processing) Subscription-based online service |
| | Back-office processes |
| Financial and Insurance | Healthcare claims adjudication process |
| | Administrative back-office process; Premiums processing; E-policies offshore process |
| Healthcare management | Administrative, back-office processes |
| Sales | Vendor information processing |
| Oil and Gas | Finance and accounting: the process of reconciliation the bank with the cash from the stations in the previous day |

# 9 CONCLUSION

The objective of this project is to offer a Web based Robotic Process Automated application that can convert currency. Conclusion summarizing the entire work and findings. For the academic scope, this work has been carried out following widely accepted processes in the field of research,thus granting high scientific rigor to the results obtained. For this, 3 scientific papers obtained from well-known bibliographic sources have been analyzed. Results showed that:(1) there is a high interest of the scientific community in this area and (2) there is an increasing tendency regarding publications related to RPA.

# 10 FUTURE SCOPE

This can lead to the conclusion that the number of RPA researches will continue the growth in the future. Having in mind that RPA is a rather new and emerging field, the results identifying the appearance of 17 conference papers against 10 journal articles imply that the full research potential on RPA topic hasn't been achieved yet. Hence, it can be concluded that the studies on RPA have only begun to emerge and it is expected they will achieve its proliferation in the next few years.

# 11 BIBILOGRAPHY

References:


1. https://www.researchgate.net/publication/339341848_Robotic_Process_Automation_A_Scientific_and_Industrial_Systematic_Mapping_Study
2. https://www.ops.gov.ie/app/uploads/2021/01/RPA-SystematicLiteratureSurvey.pdf
3. https://www.researchgate.net/publication/335400552_Robotic_Process_Automation_Systematic_Literature_Review

# APPENDIX

## A. Source Code:

```
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Converter - ICP Link"
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bpversion="7.0.0.40580"
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preferredid="3ba5e969-
9db2-4b55-8600-
803f07225c50">
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    <cameray>135</cameray>
    <zoom version="2">1.25</zoom>
  </view>
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type="End">
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type="ProcessInfo">
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    </inputs>
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required workbook should be opened. The default of zero indicates the
currently active instance." expr="[handle]" />
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narrative="The path and name of the file which should be opened."
expr="&amp;quot;C:\Users\hp\Desktop\Currency Convertion ICP.xlsx&amp;quot;"
/>
    </inputs>
    <outputs>
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Name" narrative="The name used by Excel to identify the workbook -
usually this is the file name (without the path)." stage="Workbook
Name" />
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name="Workbook Name" type="Data">
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```

```
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indicates the currently active instance." expr="[handle]" />
      <input type="text" name="Workbook Name" friendlyname="Workbook
Name" narrative="The name of the workbook which contains the sheet
required. The default empty text indicates the currently active
workbook on the specified instance." expr="[Workbook Name]" />
      <input type="text" name="Worksheet Name"
friendlyname="Worksheet Name" narrative="The name of the worksheet
within the specified workbook which should be written to a
collection. The default empty text indicates the currently active
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/>
      <input type="text" name="Fetch Data With Method"
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and Value2. The default indicates Value will be used." expr="" />
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    <outputs>
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sheet being retrieved." stage="Data" />
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  </stage>
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Currency" />
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the currently active instance." expr="[handle]" />
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Name" narrative="The name of the workbook within which the data
should be written. The default empty value indicates the current
workbook within the specified instance." expr="[Workbook Name]" />
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friendlyname="Collection" narrative="The collection containing the
data which should be written to the worksheet." expr="[Data]" />
      <input type="text" name="Worksheet Name"
friendlyname="Worksheet Name" narrative="The name of the worksheet on
which the given data should be written. The default empty value
indicates the current sheet within the specified workbook."
expr="[Sheet1]" />
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Reference" narrative="The reference at which the collection should be
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Name" narrative="The name of the workbook which should be closed."
expr="[Workbook Name]" />
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