STANLEY BUILD-A-THON
TOPIC: WEB AUTOMATION

TEAM NAME: TRIPLE HELIX

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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. Just like people, software robots can do things like understand what's on a screen, complete the right keystrokes, navigate systems, identify and extract data, and perform a wide range of defined actions. But software robots can do it faster and more consistently than people. In the race to outpace digital transformation, robotic process automation (RPA) is often heralded as a quick and easy way to streamline critical processes, often extending the life of legacy systems. While RPA is valuable to furthering the overall path to digital transformation, it is best used as a short-term fix. To eliminate tactical band-aids and costly disruption, organizations need to focus on a long-term intelligent automation strategy.

1.2 PURPOSE

Web Automation has become one of the world's most popular business applications because it helps professionals efficiently organize, analyze, and present information. Businesses and applications today are widely structured on web-based systems. Blue Prism, a platform providing a digital workforce that can perform any task of an operation staff member working on their PC. . Blue prism is a UK-Based Software Company and is one of the leading robotic process automation tools. It is used to automate mundane tasks such that they could operate without any manual intervention. Blue prism has gained edge over its competitors as it has better security, flexibility, scalability, compliance, and resilience. With Blue Prism, a powerful robotic process automation (RPA) tool, you can be even more productive with Excel. Blue Prism comes with an Excel VBO file that you can leverage to quickly start automating key Excel processes. With RPA, you can

achieve all the goodness that results from Excel without the associated manual or mental labor. Imagine the thrill of error-free output in half the time, every time.The architecture of the Blue Prism involves four main software elements. They are: ➤ Object Studio – Enables you to create a reusable Visual Business Object (VBO) for your business process. ➤ Process Studio – Enables you to design, create, edit as well as test business process, developed from reusable VBO. ➤ Control Room – Enables you to schedule, run and handle processes ➤ Release Manager – Streamlines and automates release as well as change management functions within the platform.

CHAPTER 2

LITERATURE SURVEY

2.1 EXISTING PROBLEM

In current system, few applications are tested only using manual testing process and many other applications do have both manual and automation testing . Only manual testing is preferred for few applications testing because The application to be tested is small. Increase in project cost due to hiring automation resources or purchasing of tools if necessary. Unavailability of as many automation resources as needed before the project could start for a specific automation tool which is planned to use for automation testing. No Regression testing involved once the code is moved into production.
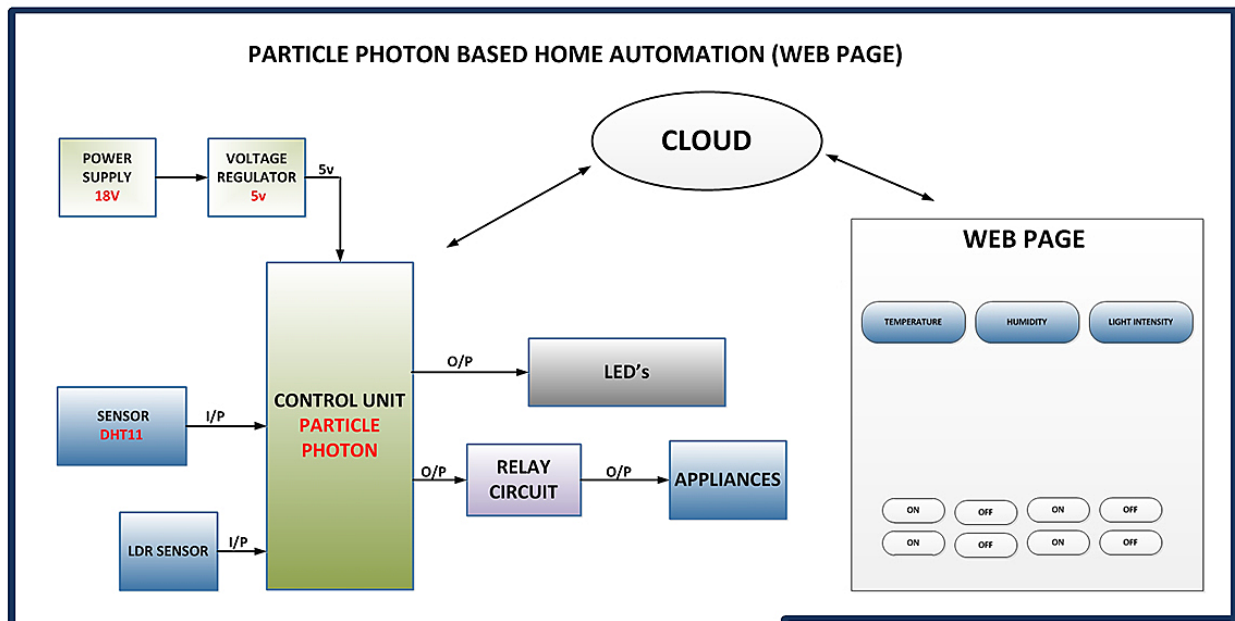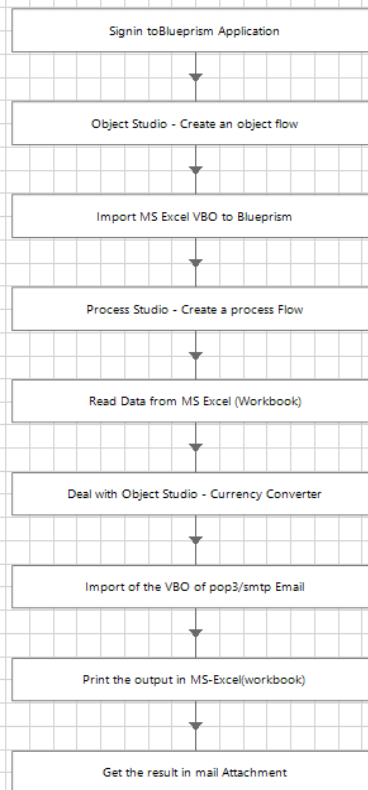
2.2 PROPOSED SOLUTION

The basic idea is to have a web project replacing stand-alone project. With Automation, Web automation has become very simple, it reduces manual errors; eliminates repetitive and time-consuming work .The proposed system is a web based application running on the apache tomcat server. It can be accessed by the entire QA team (Quality Assurance) connected within the network. This application uses TestNG API to generate xml code for scripts execution. The web application is designed using Eclipse as an IDE, languages used for implementation is DHTML(HTML, Java Script, CSS), JSP and Excel file(.xls) to store all the test classes which is a java file. The execution of test scripts is carried out by the webserver and the results are displayed on the JSP page .

CHAPTER 3

THEORITICAL ANALYSIS

3.1 BLOCK DIAGRAM

PARTICLE PHOTON BASED HOME AUTOMATION (WEB PAGE)

| Signin toBlueprism Application |
| Object Studio - Create an object flow |
| Import MS Excel VBO to Blueprism |
| Process Studio - Create a process Flow |
| Read Data from MS Excel (Workbook) |
| Deal with Object Studio - Currency Converter |
| Import of the VBO of pop3/smtp Email |
| Print the output in MS-Excel(workbook) |
| Get the result in mail Attachment |

FLOW DIAGRAM OF THE PROCESS

3.2 HARDWARE/SOFTWARE DESIGNING

Hardware Required:

The following is the Hardware required to complete this project:

- Internet connection to download and activate.

- Administration access to install and run Blue Prism .

- Minimum 10GB free disk space .

- Windows 8.1 or 10 (64-bit version only) OR Cloud: Get started free, *Cloud account required.

- ○ Minimum System Requirements To run Office Excel 2013, your computer needs to meet the following minimum hardware requirements.

Software Required:

Blue Prism : The Following are the pre-requirements for the project :

- ○ Signup for the Blue Prism and create a new account from its official website.
- ○ Login to Blue Prism Portal and install the software and get license for the same .
- ○ Setup your software into our pc/laptop by applying the license key , and there we go with the installation of blue prism onto your system .

CHAPTER 4

EXPERIMENTAL INVESTIGATIONS

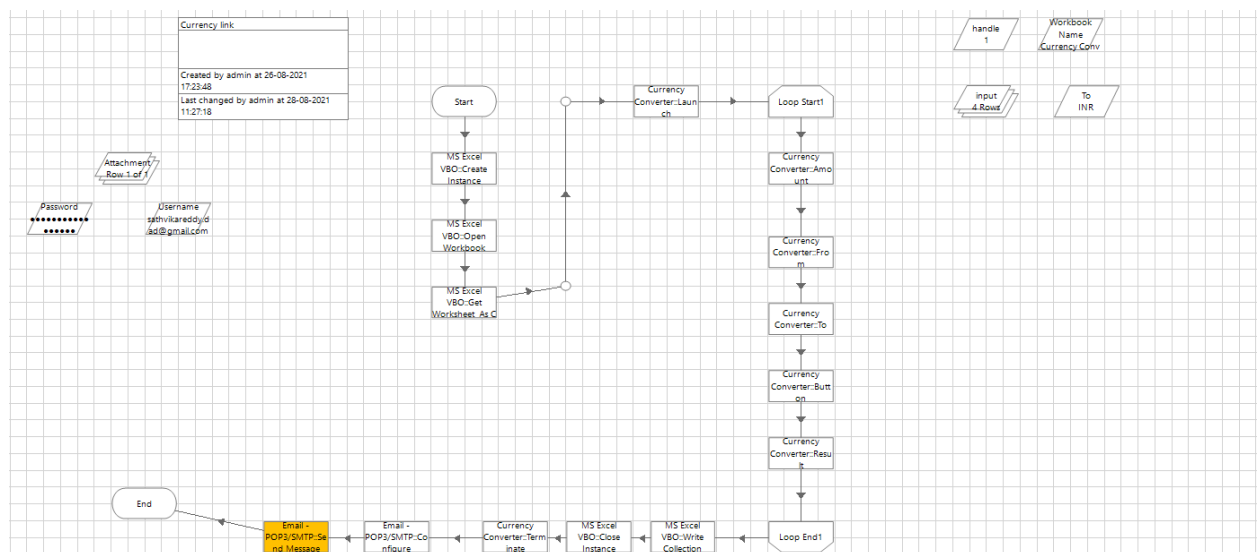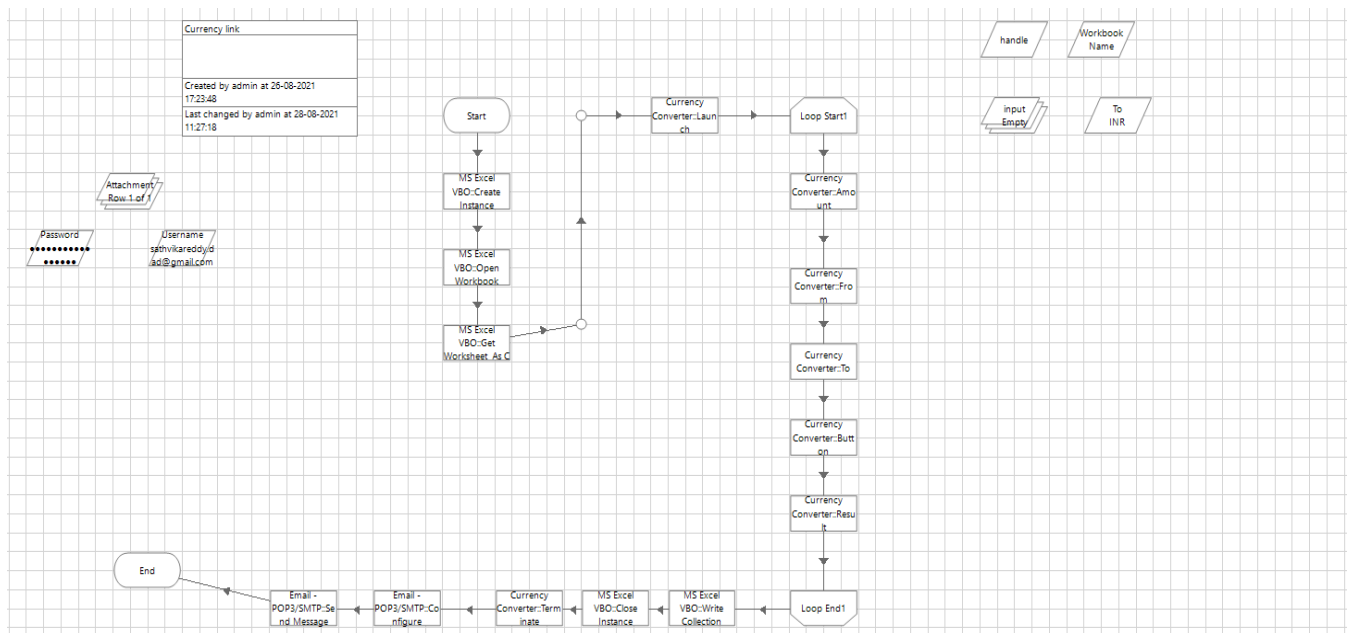**Use Case:** Web Automation (RPA)

Solution: Currency is given in the excel sheet which is read by bot, the bot converts the currency into given respective currency and returns the value in excel sheet.We make use of Blue Prism software which is used for automating Excel, XML, csv, pdf, etc and prepare reports. The RPA Blue Prism tool offers flow chart like designer with drag and drop feature to automate each step of the business processes. This involves downloading reports and data from websites, followed by data massaging. Automation Anywhere is an RPA tool that is used to Automate any repeated simple/complex tasks with ease. Automation Anywhere is not perfect but it is still the best tool available in today's market. Here we make use of Blue Prism for automating Excel tasks and preparing reports.

Our aim for the project is to use the bots to read and extract information from Excel, transfer the data into url, then converting the value into allocated currency value. These are done step-by-step through loops, where we give the required values, data types, and task to be done. We have

in-built loops according to our needs and uses in our Blue Prism software. We should manually pass the data in several steps with import and export of data to and from excel which is not efficient. Here the bots are doing the work for us. Through the software, we have been able to reduce the time that we spend on manual, repetitive tasks so that we can focus on activities that add value to the business or to ourpartners and customers. The most important things are saving time, increasing control, and increasing automation. Blue Prism software enables business operations to be agile and cost effective by automating, manual, rule-based, repetitive.

CHAPTER 5

FLOWCHART

CHAPTER 6
RESULT

	A	B	C	D	E	F
1	From	Amount	INR			
2	CAD	39	2,270.701645 INR			
3	EUR	24	2,080.932025 INR			
4	USD	100	7,349.792855 INR			
5	ADE	344	73.497929 INR			
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Currency Converter Data.xlsx

CHAPTER 7

ADVANTAGES & DISADVANTAGES

ADVANTAGES :
- Faster Feedback Cycle.
- Teams Saves Time .
- Reduced Business Expenses.
- Higher Test Coverage.
- Reusability of Test Suite.
- Faster Time to Market.
- Better Insights .
- Improved Accuracy.
- Web automation reduces the dependability of testing on the availability of the test engineers.
- Web automation provides round the clock coverage as automated tests can be run all time in 24*7 environment.
- It helps in testing which is not possible without automation such as reliability testing, stress testing, load and performance testing.

DISADVANTAGES :
- Proficiency is required to write the automation test scripts.
- Debugging the test script is major issue.
- Test Maintenance is costly in case of playback methods.
- Maintenance of test data files is difficult , if the test script tests more screens.
- Web automation would also require additionally trained and skilled people.
- Web automation only removes the mechanical execution of testing process, but creation of test cases still required testing professionals.

CHAPTER 8

APPLICATIONS

Web automation tools allow you to optimize and automate a lot of processes that almost every office employee must perform from time to time, among them:

- Filling in online forms

- Organized information.

- No manual work due to which typing or calculation errors can be minimized.

- Scraping data from web pages

- Generating and downloading online reports

- Checking information online

- Arithmetic Calculations are done automatically.

Examples of automating web applications and web pages

- Web scrapping

- salesforce

- Craigslist

- Translation

CHAPTER 9

CONCLUSION

The emergence of responsive web design , more than six years ago, showed us the vision for our future sites: a world where users can have great experiences no matter what devices or what screen sizes they have those experiences on. However, it was also clear to us that this change was not going to happen without effort—and a tremendous one, at that.Web automation brings true relevance to the term 'agile' by hastening your iterations or sprints.

CHAPTER 10
FUTURE SCOPE

The scope of Web automation or automation testing future scope is huge in the market .This was the time when automation testing works towards the technical world . It had 2 primary goals , to be a reliable Software Testing method and meet the requirements in less time , cost and labor.The testing method that could provide the same throughput as Manual Testing, but with minimal labor and cost. In addition to this, they also wanted to reduce the repetitive tasks of Manual Testing.

CHAPTER 11

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