CHAPTER 1

INTRODUCTION

Web automation aims to see how a real person uses a web browser to automate repetitive scenarios. Website automation is powered by robotic process automation (RPA) software. RPA software robots can be programmed to replicate the actions you'd take on a website like navigating a browser window, clicking links and buttons, sending keystrokes, and more. You can use web automation for many tasks like scraping data from a website, entering information into an online form, and logging into a website. While these tasks seem simple, when you repeat these steps over and over, it can add up to a big chunk of time. Any task that involves your interaction with a web browser can be automated to help save you time in your daily work so you can focus on more value-added activities.The Hotel Booking of web Automation is a Robotic Process Automation (RPA) Project. The Bot is majorly created to enter the user data automatically in the website like hotels.com, trivago.,, etc. The user can give required place and can able to book the hotel, based on user convenience. The bot actually works on the user information and to list out the hotels and then to confirm the booking.The process is easy and highly based on cost and time efficient. The requirements of the user are obtained by predefined filter list and from that the user chooses based on budget and comfort, then the check for availability of the room is done by the agent and will be specified with email notification to particular customer.

1.1 PROBLEM DEFINITION

The existing system provides only normal booking of hotels in a website. Where user can manually enter the data and to search hotels. The user is not sure when there will be a server problem or time consuming activity. And to reduce the effort of user, will give requirements to bot and it will fill out the needs and then it will mark a hotel to user needs. A database is used for storing and administering all types of data required for efficient and accurate prediction. It can achieve the easy way booking the hotel with less time.

1.2 OBJECTIVE OF THE PROBLEM

Our aim is to make user effortless and to get specified field in the website. The objective of the project is to develop a system that automates the process and activities of a hotel booking. Automatically the bot will enter the user information in the website by fetching of data.

1.3 SIGNIFICANCE OF THE PROJECT

UiPath is a free, fully-featured and extensible version of our automation tool. This platform delivers the fastest and most reliable RPA that enhances business performance at unlimited scale. It is easy to use, highly responsive, and instantly scalable to allow you to build the process.

RPA tools are defined as non-integrated, stand-alone software for laptops and workstations. UiPath is recognized worldwide for product leadership and technical excellence. RPA is the largest in the industry, the most active in the automation field.

A UiPath feature has three main products:

- **UiPath Studio-** It designs automation process using diagrams, which are visually appealing
- **UiPath Robot-** Executes the UiPath Studio Processes
- **UiPath Orchestrator –** It is an application that deploys, manages, and monitors processes/robots

UiPath Robots and Executors interact with huge amounts of data at the same time. We can run a process either on a single, or multiple robots or any specified number of robots and can group them in the environment.

UiPath Studio software automates back-office repetitive tasks. It is one of the tools used in automating business processes. It converts each task into UI automation, thereby making work easier and quicker. Multiple workflow designs are available in Studio. UiPath Studio comes with a debug component that easily locates problems within complex workflows. This easily verifies the execution activity and observes if there are any errors in the output.

1.4 OUTLINE OF THE PROJECT

For booking the bot will gather the information from the user to enhance the website to use effectively and then based on the requirements it will process the access .All users' needs few information based on the place and stay to complete their task. And the system needs the same functionality to complete their various tasks like:

1. **User:**

    a. Forms/register/login
    b. Check availability of rooms
    c. View ratings
    d. Booking confirmation
    e. feedback

2. **Website :**

    a. up to date checking
    b. validation
    c. filtering
    d. manipulation

CHAPTER 2

LITERATURE REVIEW

A literature review is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and do not report new or original experimental work. In Robotic Process Automation (RPA) is the use of software with capabilities to handle high-volume, repeatable tasks that previously required a human to perform. It aims to use a computer to manipulate existing application software in the same way that a person works with those systems and the presentation layer to perform a specific task. This technology increases the productivity for human employees who no longer are tasked with boring work. The Hotel currently runs a manual booking system and therefore requires customers to only book for rooms or any other service by walking to the receptionist or calling them on phone or using a third party option. Any enquiry to be made demanding feedback must usually be forwarded to the hotel in person. Sometimes management is given false reports concerning the work flow of the hotel and employees also give falsified pricing information to customers from time to time. From an employee's account, details of customers are hardly used in the workflow and that also, records are not properly kept; books used to keep records are disposed of when they get filled up. Hotel hardly advertises and depends on word of mouth adverts by some loyal customers in and around its vicinity. The proposed system is a web-based application that allows customers to make enquiries online and book for services providing the required details.

[1]Online Hotel Reservation System

It was published in 1976. It is a computerized system that stores and distributes information of a hotel, resort or other lodging facilities. Information systems are employed to support decision making and control in an organization. Information systems can also be used to analyze problems visualize complex subjects and create new products. Input processing and output are the three activities in an information system that produces the information an organization need.

[2]Consumer's Preferred Criteria for Hotel Online Booking

It was published in 2007.The most commonly featured attributes are star rating, price, location/map, photographs of the rooms and the hotel, information about the rooms and facilities, information on the surrounding area. This paper presents findings about consumers' stated preferences for decision criteria from an adaptive study among respondents.

[3]Consequences of Customer Confusion in Online Hotel Booking

It was published in 2004.Relatively new concept in consumer behavior research. Increasingly, consumers get swamped by a large variety of opportunities to choose, similar products and information, and the increasing complexity of products and services. While previous studies mostly explored the markets for convenience- and shopping-goods in the stationary retail industry, this paper investigates the consequences of customer confusion in online booking of hotels.

[4]Online computerized Hotel Management System

It was published in 2014.The purpose of this research, computerized hotel management system with Satellite Motel Ilorin, Nigeria as the case study is to understand and make use of the computer to solve some of the problems which are usually encountered during manual operations of the hotel management. Finding an accommodation or a hotel after having reached a particular destination is quite time consuming as well as expensive. Here comes the importance of online hotel booking facility. Online hotel booking is one of the latest techniques in the arena of internet that allows travelers to book a hotel located anywhere in the world and that too according to your tastes and preferences.

Advantages of the Automation process:

- The Humans are under the era of committing the mathematical and parallax errors while in terms of the RPA the errors are very low.
- The work can be done faster and efficient from man-hours and man-years to Minutes and Seconds.

CHAPTER 3

SYSTEM SPECIFICATION

3.1 HARDWARE REQUIRMENTS

The requirements analysis includes the hardware and software requirements for the project.

SYSTEM CONFIGURATION

Memory : 8 GB RAM

Processor : AMD Ryzen 5 3500U with Radeon Vega Mobile Gfx, 2.10 GHz

System type : 64- bit Operating System, x64-based pc

3.2 SOFTWARE REQUIRMENTS

Operating System : Windows 10

Tool : UI Path Community Edition

CHAPTER 4

SYSTEM ANALYSIS

A detailed study to determine whether, to what extent, and how this system is used, it is usually an analysis of exiting system. In order to state about the design of the new system, including the development of system specification which provides a base for the selection of equipment.

4.1 EXISTING SYSTEM

- Propose a new technique for up to-date rooms available in various hotels.
- In addition, there is confirmation mails and which is sent after the confirmation of rooms booking.
- Rooms will be booked through web.

4.1.1 Drawbacks of Existing System

- IT costs.
  - ✓ IT costs which many of these smaller travel agencies might not be able to afford. By outsourcing IT to Amadeus, many of these online travel agencies have been successful at reducing cost and complexities. It also Translates to increase the productivity.
- Customer loyalty.
  - ✓ Even though there are multiple websites available for hotel booking, travelers often prefer to go brick-and-mortar travel agents for the actual booking process.
- Customer acquisition.
  - ✓ Many new customers are using mobile as their primary Internet device and making their first booking on a small device last minute. Internet access and the slow adoption of online credit payments in markets where

e-commerce is a foreign and still nascent industry have been cited as issues and hurdles for online hotel booking sites.

4.2 PROPOSED SYSTEM

In this proposed system it will automatically enter the data to website by the user requirements. Sends a notification message to make the customer aware. In case of confirmation it will send a message or mail.

4.3 FEASIBILITY STUDY

The feasibility of the project is analyzed were the automation process is simplified and less efficient. In proposed system the automation process is not a burden to any of the business applications. In feasibility analysis, the booking site is the major requirement and essential in the robotic automation. The feasibility study, investigates that manual checks for the hotels and based on the facility it will process the booking. It seeks to determine to provide a simple task of automating the process, so that the time and manual errors are reduced. In the time of development, the study gathers information by using a variety of activities, which are implemented to the work flow are:

- Entering the information on web is automated through Uipath.
- Now the bot checks for the information given by user, if there is no rooms available in the site then the bot will terminate automatically, else the bot checks into the availability of rooms.
- Data entering is done on the details given by user and the rooms that are booked for the customers.
- Excel automation on the scraped data.
- Checking the available hotel rooms for booking through web updating method is mandatory.

- If there is any required hotel room that the customer needs then it will notify it to the customer. In case the price decline or the required hotel is encountered the bot notifies with message along with an Email automation is sent.
- The main goal of the feasibility study is to reduce the time, the customer visits the booking site regarding the rooms.

4.3.1 TYPES OF FEASIBILITY

Feasibility study can be done in three ways, they are:

- Technical Feasibility
- Operational Feasibility
- Economic Feasibility

4.3.1.1 TECHINICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the automation system. We will be using Windows 10 for the automation process. The software used for the automation is UiPath which is a free, fully-featured and extensible version of our automation tool. This platform delivers the fastest and most reliable RPA that enhances business performance at unlimited scale. It is easy to use, highly responsive, and instantly scalable to allow you to build the process.

4.3.1.2 OPERATIONAL FEASIBILITY

Operational feasibility is the measure of how the rooms are available and is monitored by automation. It is depended upon determining whether the site is active for monitoring the room's availability in the automation system. It refers to project whether the system will operate and UiPath automation tool is installed. The UiPath tool is used to automate the automation process. The bot monitors on the rooms. It sends a notification message along with a mail to make the customer aware. In case of hotel changing or more cost efficient hotel, it sends message. If any errors are found in between, the automation throws an exception and easily fixed from the error part.

4.3.1.3 ECONOMIC FEASIBILITY

Economic feasibility is carried out to check economic impact on the system which is automated. Since RPA (UiPath) is an open source automation tool, it can be applied to various business application process and no expenditures required. Thus the automation process goes well and freely available.

CHAPTER 5

SOFTWARE DESCRIPTION

5.1 UIPATH

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locates problems within complex workflows. This easily verifies the execution activity and observes if there are any errors in the output.

5.1.1 FEATURES

- **Workflow Types and Activities**– Multiple types of workflows are available in Studio (sequences, flowcharts and transactional business processes) that help you build your automation workflow according to your needs. To create these workflows, you need activities (actions that you use to automate apps, such as clicking and typing). Around 300 of these activities exist, and they enable you to interact with web browsers, desktop apps, PDFs, images, databases, terminals, Excel spreadsheets, email accounts and many others, while you can also easily create HTTP and SOAP requests.

- **Recorder Functionality** - The easiest manner to create workflows is by using the record feature. Four types of recordings are available: **Basic**, **Desktop**, **Web** and **Citrix**. The first two can help you automate desktop applications, while the others enable you to properly handle web apps and virtual environments.

- **Variables and .Net Functions** - A variable enables you to store a value, but only of a certain type. In addition to these, .Net functions can also be used to enhance your automation, such as .Trim which removes the spaces from the beginning and end of a string, or .To String which transforms a certain type of variable into a string.

- **Robots and Orchestrator**– Robots, the UiPath executors, can interact with a large amount of applications in the same time. An example is provided in the video.

Orchestrator, the final piece of the puzzle, is used to manage multiple deployed Robots. This type of environment is usually found in large enterprises that need to automate many business processes. The first thing you need to do in this web app is register your Robot(s). After that, you need to group them together in an environment.

Workflows published to this platform have to be linked to an environment, and from there, you start executing: be it right now or based on a custom- defined schedule. You can run a process on one or multiple Robots, a specified number of them or on all the Robots that are grouped in an environment.

- **Assets and Queues -** Since Robots may need to share information, a special kind of variables are introduced in Orchestrator, assets. These enable you to store information (including credentials) in the web app's database, so that changing a value that is used in multiple processes becomes easy, and multiple Robots can have access to it.

  UiPath also makes use of work queues to distribute the load of a transactional process among multiple Robots. They can be scheduled to begin before or after a certain date, and detailed information contained in each queue item can be viewed.

- **Logs, Audit, Alerts** - In the Logs tab you can easily see how the Robots performed, what jobs were completed or failed. In addition, every step carried out by the user can be audited, and alerts are sent by email to all those who have the required permissions.

  Finally, roles management is available, along with other nice features such as importing users from an Active Directory group, splitting up automation

processes among teams through multiple tenants, and displaying information in neat charts.

5.1.2 ADVANTAGE

- UiPath is considered to user-friendly.
- UiPath provides with high speed in case of implementation.
- This can be utilized in case if several services related to integration that have a different module for workflow.
- The main advantages of this tool that it provides desktop contribution and also Citrix environment.
- A community edition is provided by this tool which is free so that everyone is allowed to learn and download study materials.

CHAPTER 6

PROJECT DESCRIPTION

This chapter provides the problem definition and describes the roles of the different subject of the system. It also lists the different modules and the option under it. It will allow automatically booking the hotels and available rooms are tends to notify it to the customer.

6.1 PROBLEM DEFINITION

The existing system faces few problems that the customer might not be aware of websites and booking in online is difficult for them so, the agent will get information from the user and will set a price for customers range and agent will give information in excel, after that it automates the information and will book the availability rooms. Availability rooms need to be manually checked by the agent by visiting the site each and every time. After the completion of process mail will be sent to that particular user on room booking.

6.2 OVERVIEW OF THE PROJECT

The bot is developed to check on the booking availability of rooms and to book it automatically by using Uipath tool. To get the information from user, agent will be getting their information and they will specify their requirements and range of the cost is specified. If the rooms are not available at the moment, the bot terminates automatically. Now the room monitoring is done correspondingly. Once the room is booked, the bot notifies with a message followed by a notification followed by an e-mail message. In case of booking the confirmation process with the message and with a notification is sent to the customer.

6.3 MODULE DESCRIPTION

Module description provides detailed explanation of the functionalities involved in the application.

The following are the modules involved in this application:

1. Excel Automation
2. Generating the list
3. Automating the process
4. Confirmation the room booking

6.3.1 EXCEL AUTOMATION

In the Excel Automation, after getting information from user through agent, the data's are fetched into the excel sheet. Excel automation is done by using the Excel Application Scope activity comprising of Write Range activity. The data are arranged as users name in order, and their email id, date, time of check-in and check-out. This enables us to check the room availability and process information on the website.

6.3.2 GENERATING THE LIST

In this module we get the information from user through excel and we generate the list of hotels based on the customer preferences. The preference are ratings, cost, quality, maintenance, etc.. It requires of high range in booking via website and for booking, people should be aware of online websites and need to be caution on payment. Here few might not be known of these online sites, so agent will interact with the customers and will get information and booking is based on that customer's information. Then the process will be automated.

6.3.3 AUTOMATE THE PROCESS

In this phase after getting the information, it will automate the customer details and search for availability of rooms in the website. Then it will process the user's resources and based on the range of cost, quality. Searching of hotels is needed based on the user's valid data**.** After fixing of a hotel it needs to book through online payment method which will be done by the agent.

6.3.4 CONFIRMATION THE ROOM BOOKING

The E-mail automation is being generated in case when there is booking confirmation. This automation consists of the room booking through website and the message and email will be sent to the user. Here the mail is generated to the customer's mail ID which is given in the excel. After the confirmation the payment method will be processed by the agent through website.

6.4 DATA FLOW DIAGRAM-DFD

Data flow diagram is the 2-D diagram that explains how data is processed and transferred in a system. The graphical depiction defines each source of data and how it interacts with the other sources to reach common output.

SYMBOLS:

Activity and the title for the activity should be placed inside the rectangle. Data Flow Diagram (DFD) is an important technique for modeling the systems in high-level detail by showing how input data is transformed to output result through sequences functional transformations.

DFDs reveal relationship among and between the various components in a program or system. DFD consists of four major components: Entities, Procedures, Data stores and Data flow.

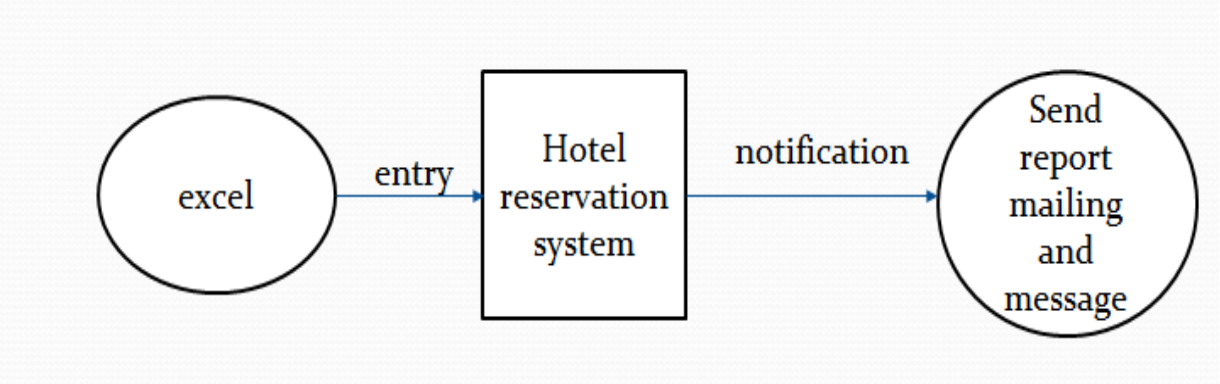


FIGURE 6.1 DFD LEVEL 0

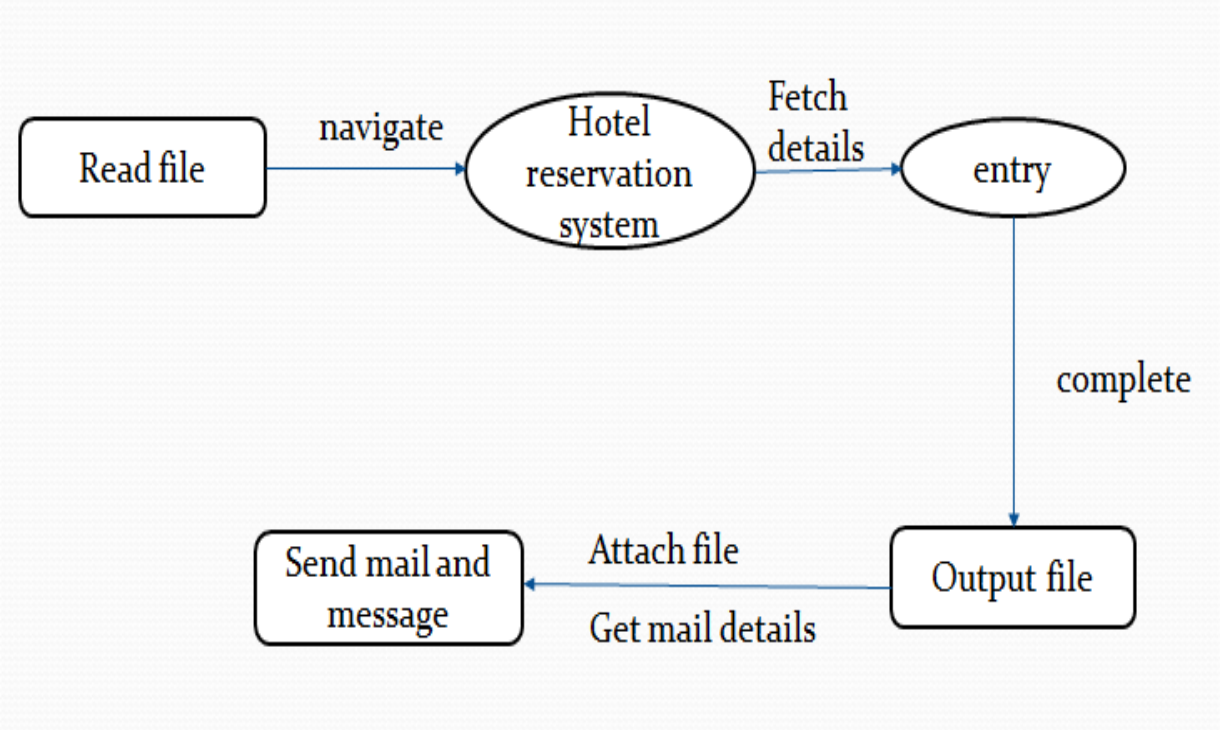
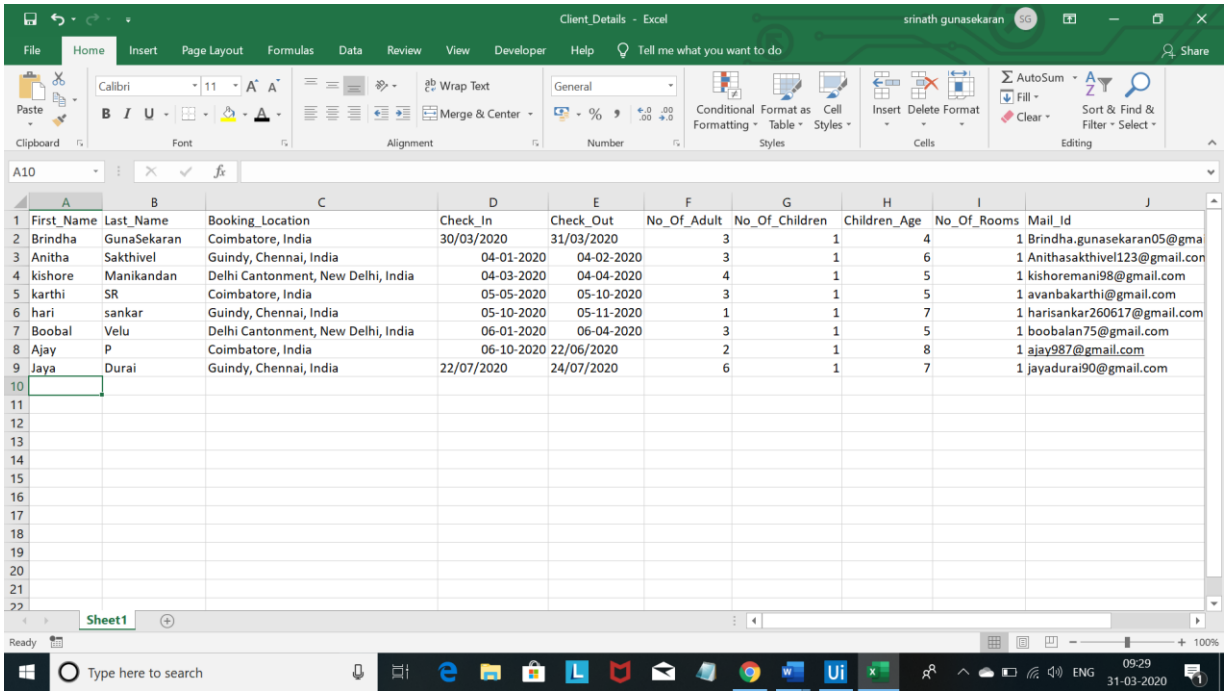


FIGURE 6.2 DFD LEVEL 1

6.5 EXCEL SHEET

TABLE 6.1 – EXCEL SHEET



First_Name	Last_Name	Booking_Location	Check_In	Check_Out	No_Of_Adult	No_Of_Children	Children_Age	No_Of_Rooms	Mail_Id
Brindha	GunaSekaran	Coimbatore, India	30/03/2020	31/03/2020	3	1	4	1	Brindha.gunasekaran05@gma
Anitha	Sakthivel	Guindy, Chennai, India	04-01-2020	04-02-2020	3	1	6	1	Anithasakthivel123@gmail.con
kishore	Manikandan	Delhi Cantonment, New Delhi, India	04-03-2020	04-04-2020	4	1	5	1	kishoremani98@gmail.com
karthi	SR	Coimbatore, India	05-05-2020	05-10-2020	3	1	5	1	avanbakarthi@gmail.com
hari	sankar	Guindy, Chennai, India	05-10-2020	05-11-2020	1	1	7	1	harisankar260617@gmail.com
Boobal	Velu	Delhi Cantonment, New Delhi, India	06-01-2020	06-04-2020	3	1	5	1	boobalan75@gmail.com
Ajay	P	Coimbatore, India	06-10-2020	22/06/2020	2	1	8	1	ajay987@gmail.com
Jaya	Durai	Guindy, Chennai, India	22/07/2020	24/07/2020	6	1	7	1	jayadurai90@gmail.com

In this excel we get the information from the user through agent .In this we get name,ph_no,booking_location,check_in,check_out,No_of_adults,No_of _children,children_age,No_of_rooms,mail_id etc.. By this information we will automate the booking process on the website.

CHAPTER 7

SYSTEM TESTING

Testing the behavior of the whole software/system in the software requirement specification (SRS) is known as system testing, its main focus is to verify that the user requirement is fulfilled. System testing should test functional and non-functional requirement of the software. Testing the software system or software application as a whole is referred to as system testing of the software to evaluate software's overall compliance with the business/functional and user requirements. The system testing comes under black box software testing. So the knowledge of the internal design or structure or code is not required for this type of software testing.

In system testing software test professional aims to detect defects or bugs within the interfaces and also within software as a whole. However, during integration testing of the application or software, the software tests professional aims to detect the bugs/defects between the individual units that are integrated together.

7.1 TESTING METHODS

- White box testing
- Basic path testing
- Stress testing
- Acceptance testing
- Black box testing
- Integration testing

i) Functional testing

ii) Non-functional testing

7.2 TYPES OF TESTING

7.2.1 UNIT TESTING

In computer programming, unit testing is a software testing method by which individual units of source code, sets of one or more computer program modules. Here it is tested whether the browser works in the booking of room automation which is specified by the display.

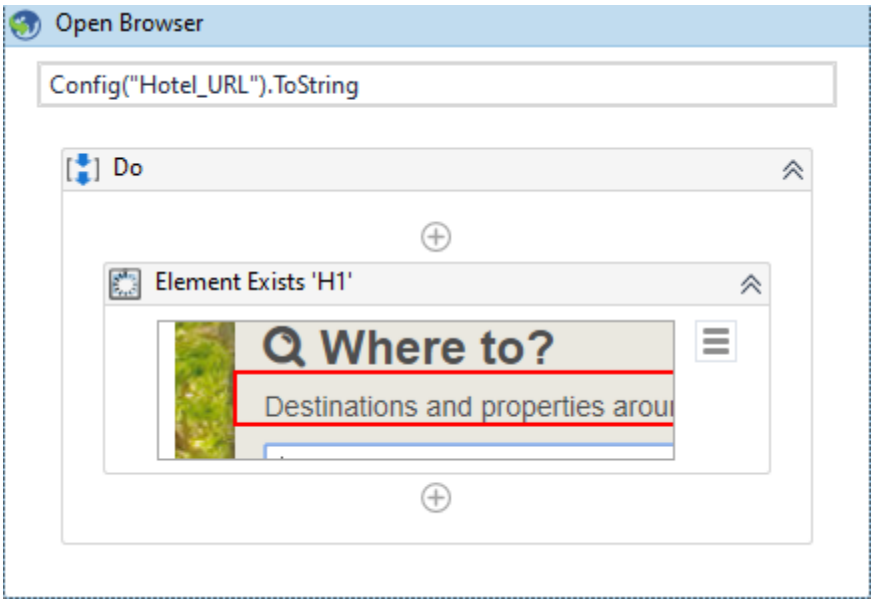
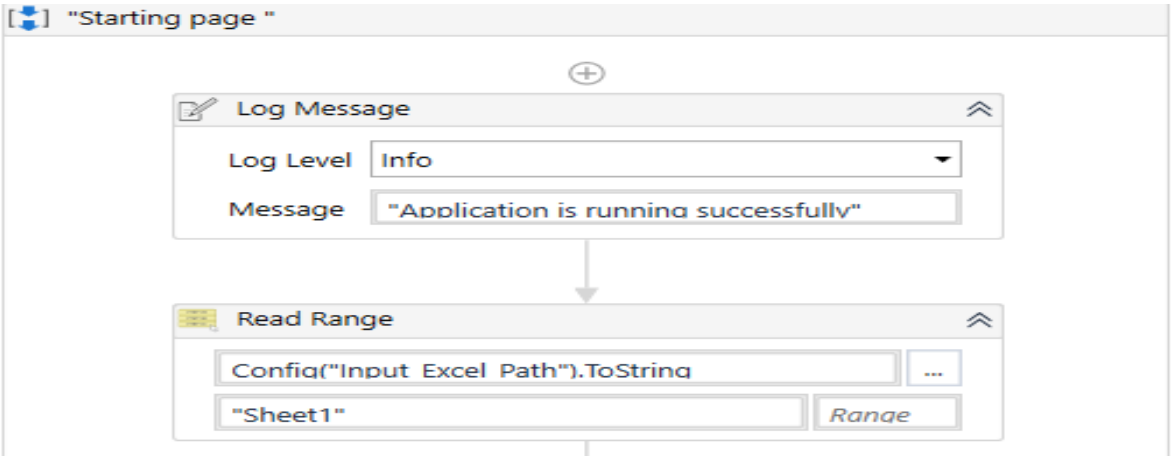


FIGURE 7.2.1 UNIT TESTING

7.2.2 INTEGRATION TESTING

Integration testing is the phase in software testing in which individual software modules are combined and tested as a group. Here the various sheet data are integrated together to perform the various calculations.

FIGURE 7.2.2INTEGRATIONTESTING



7.2.3 FUNCTIONAL TESTING

Functions are tested by feeding them input and examining the output, and internal program structure is rarely considered. Functional testing usually describes what the system does. Functional testing does not imply that you are testing a function (method) of your module or class. Functional testing tests slice of functionality of the whole system.

7.2.4 STRESS TESTING

Stress testing is a Non-Functional testing technique that is performed as part of performance testing. During stress testing, the system is monitored after subjecting the system to overload to ensure that the system can sustain the stress. Reasons can be to determine breaking points or safe usage limits.

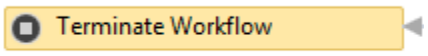


FIGURE 7.2.4 STRESS TESTING

7.2.5 ACCEPTANCE TESTING

Acceptance Testing is a level of the software testing where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.

7.2.6 WHITE BOX TESTING

White box testing is also called as Glass box testing. In this testing, by knowing the specific functions that a product has been design to perform test can be conducted that demonstrates each function which is fully operational, at the same time searching for errors in each function is applicable. It is the testing of a software solution's internal coding and infrastructure. It focuses primarily on strengthening security, the flow of inputs and outputs through the application, and improving design and usability. White box testing is based on the inner workings of an application and revolves around internal testing.

In this testing, it will check that all the activity have been processed successfully. If any of the activity is not satisfied it will throw an exception.

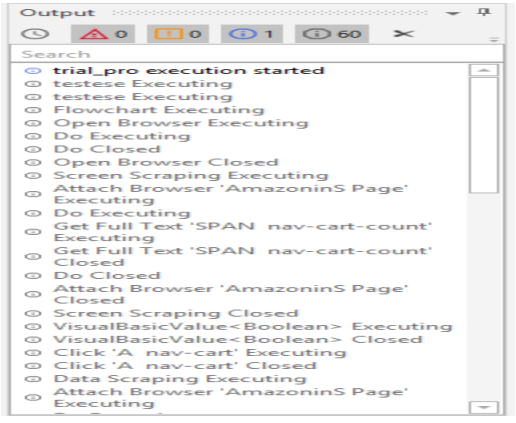


FIGURE 7.2.6 WHITE BOX TESTING

7.2.7 BLACK BOX TESTING

In black box testing by knowing the internal operation of a product, test can be conducted to ensure that, it is the internal operation performs according to specification and all internal components have been adequately exercised. It fundamentally focuses on the functional requirements of the software.

Black box testing is a software testing techniques in which functionality of the software under test (SUT) is tested without looking at the internal code structure, implementation details and knowledge of internal paths of the software. This type of testing is based entirely on the software requirements and specifications.

A software testing strategy provides a road map for the software developer. Testing is a set activity that can be planned in advance and conducted systematically. For this reason a template for software testing a set of steps into which there can be placed a specific test case design methods.

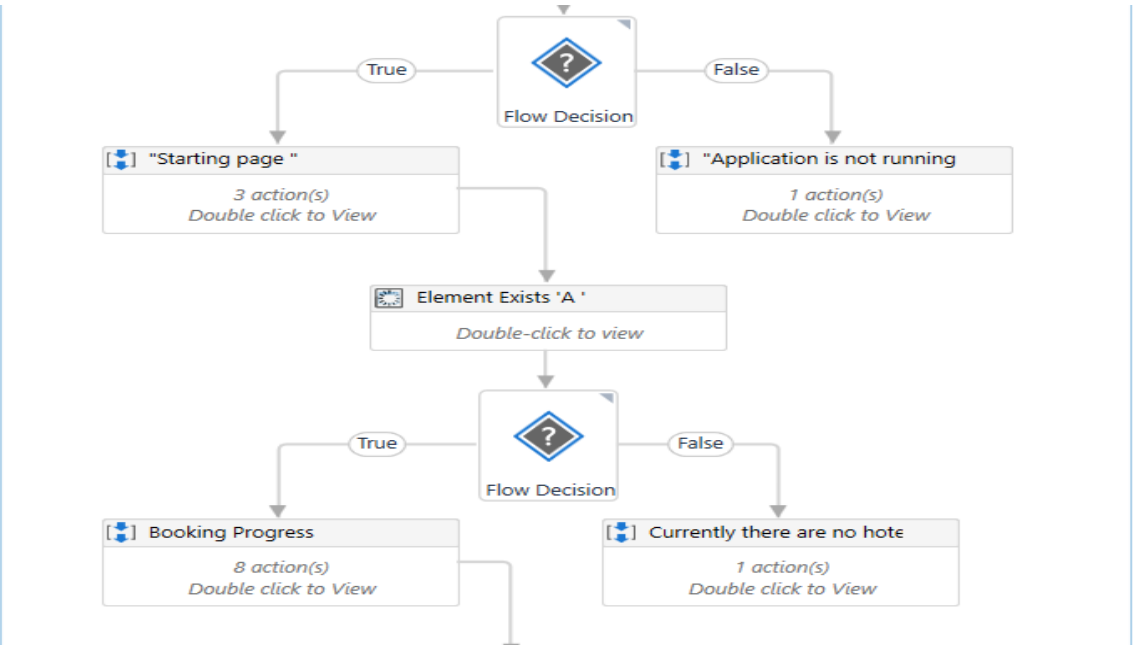


FIGURE 7.2.7 BLACK BOX TESTING

7.2.7.1 Methods of Black Box Testing

There are many types of Black Box Testing but following are the prominent Ones -

- Functional testing - This black box testing type is related to functional requirements of a system; it is done by software testers.
- Non-functional testing - This type of black box testing is not related to testing of a specific functionality, but non-functional requirements such as performance, scalability, usability.
- Regression testing - Regression testing is done after code fixes, upgrades or any other system maintenance to check the new code has not affected the existing code.

7.3 TEST CASES

A test case in software engineering is a set of conditions or variables under which a tester will determine whether an application or software system is working correctly or not. The mechanism for determining whether a software program or system has passed or failed such a test is known as a test oracle. In some settings, an oracle could be a requirement or use case, while in others it could be a heuristic. It may take many test cases to determine that a software program or system is considered sufficiently scrutinized to be released. Test cases are often referred to as test scripts, particularly when written.

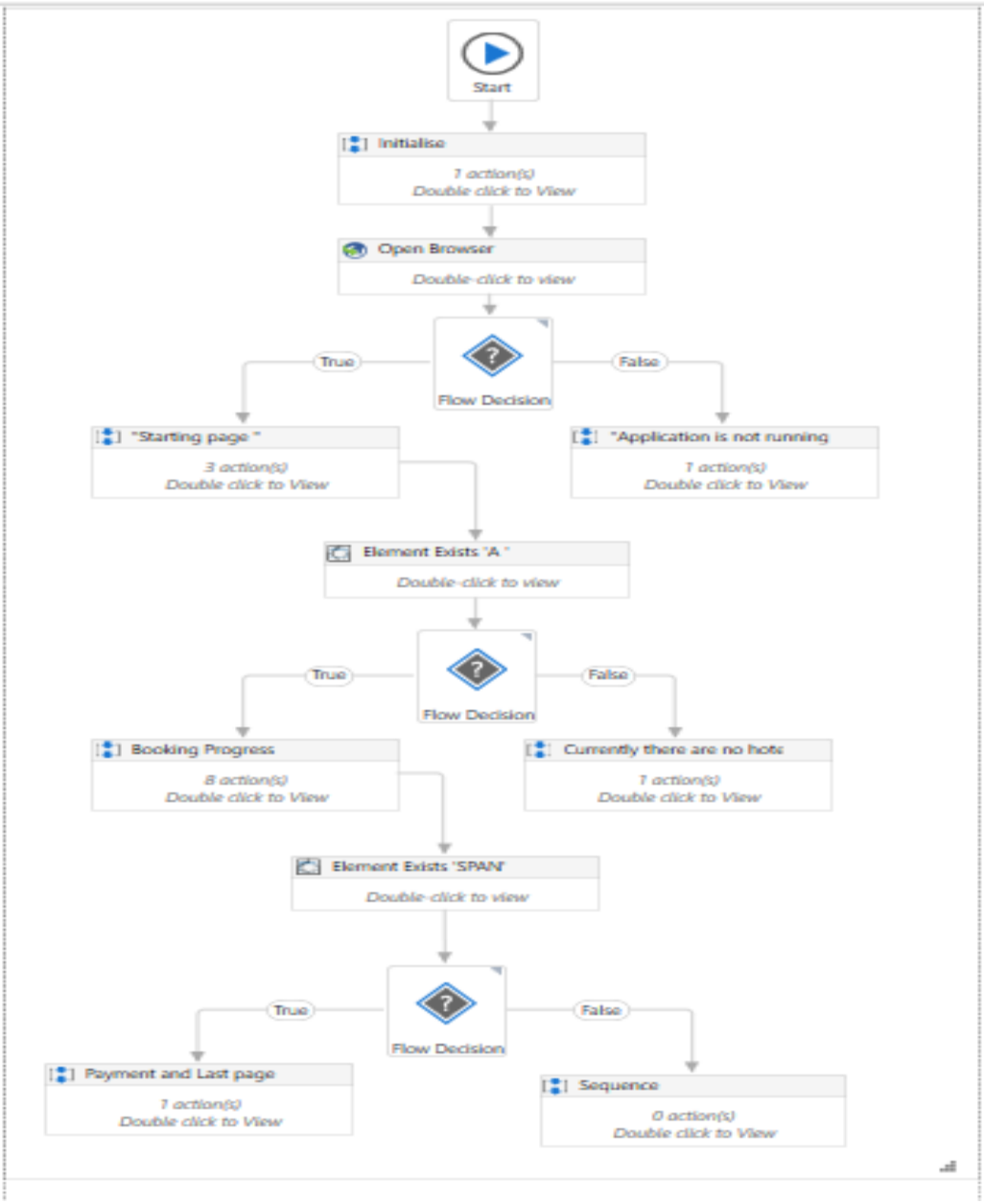


FIGURE 7.3 TEST CASES

CHAPTER 8

SYSTEM IMPLEMENTATION

Robotic Process Automation (RPA) with UiPATH:

System implementation is the construction of the new system by considering the flow of activity and way to implementing it. Robotic Processing Automation known as RPA is an emerging technology that automates a process in computer using Software Robots.

Robot is a term that refers to software or applications that replicates the action of user and communicate with the system user interface. Process is said to be steps or sequence to do certain things. Automation is doing certain things automatically.
RPA is a process of creating software robots that could do certain process automatically, without human intervention.

Example:

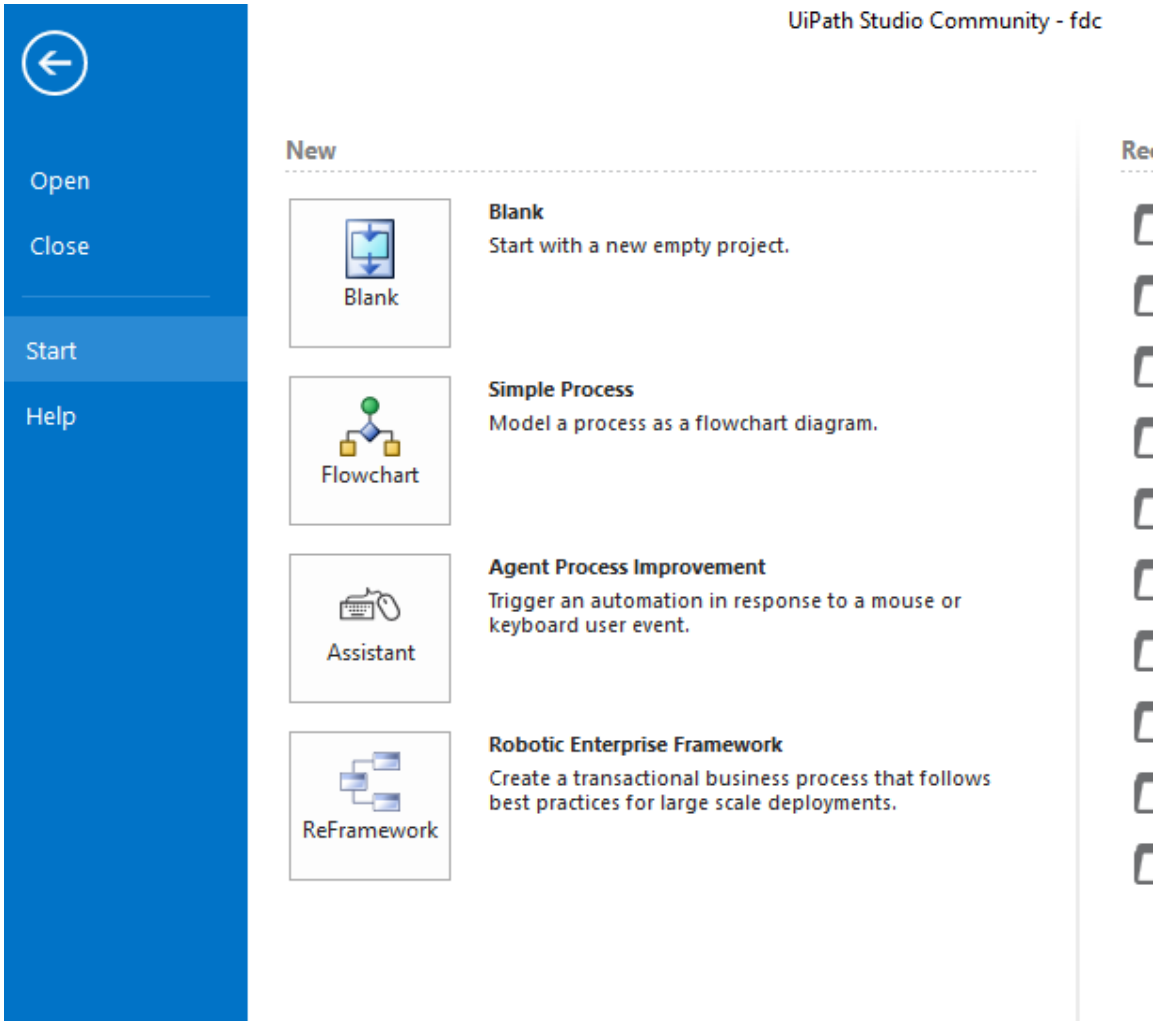
- Automatic Emails
- Data Scraping
- Automatic Document Creation
- Excel Automation

Tools Available

- UiPATH
- Blue Prism
- Automation Anywhere

UiPATH:

UiPath is the best RPA tool in terms of technology. The community edition of UiPath is free of cost and anyone can download and use it. UiPath is built using.NET framework. Hence, we can use functions of C# in it. UiPath studio is the IDE that is used to create Robotic Process Automation.



8.1 UIPATH STUDIO

This is how the start page of UiPath Studio looks like. You can select any of the options to create a process.

The process may be defined in two types:

- **Sequence**- Sequence is used when the tasks needs to be done in sequential manner.
- **Flow Charts** - Flow charts are used when there are multiple branches or conditions.

UiPath Activities:

UiPath has 300+ inbuilt activities. We can also import packages like Excel, Mail, and PDF in addition to the built-in packages. These activities are available in activities pane.

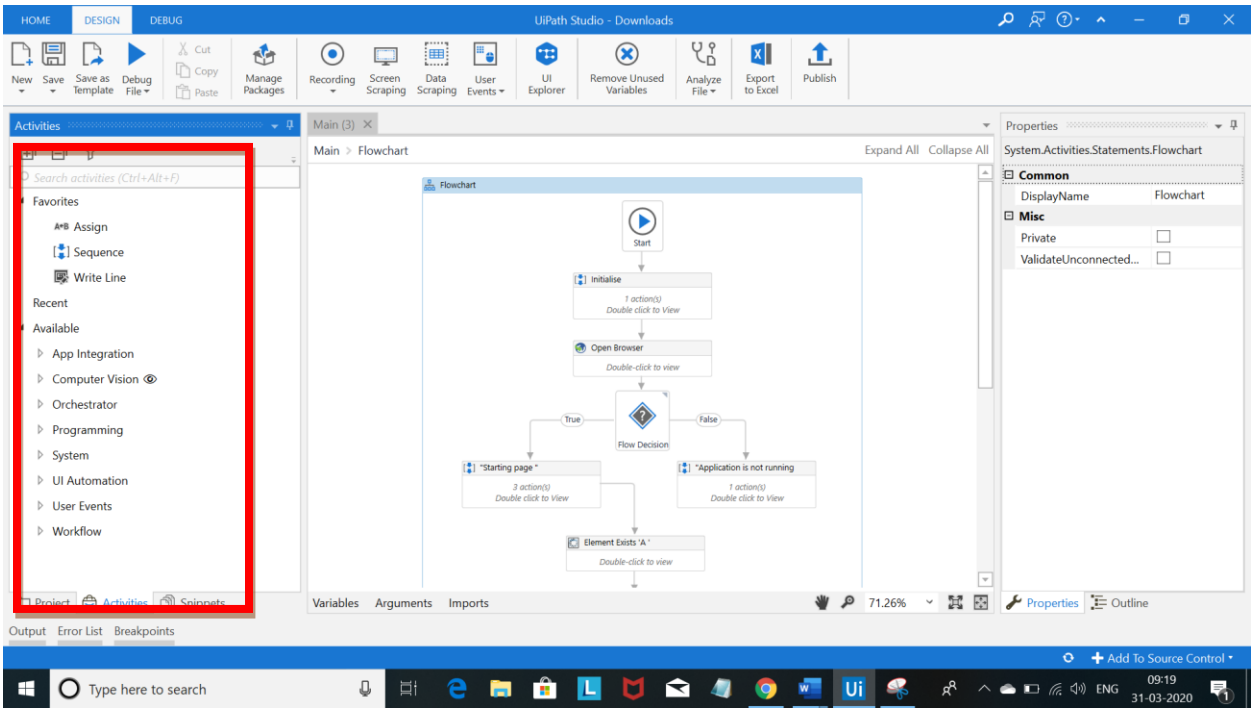


FIGURE8.1.1 ACTIVITIES PANE

Work Space:

UiPath work space is the place where we actually create sequences or flow charts. The tool allows the user to create variable and store values using the variables pane or using the properties pane. The sequences and flow charts are called as workflows in UiPath.

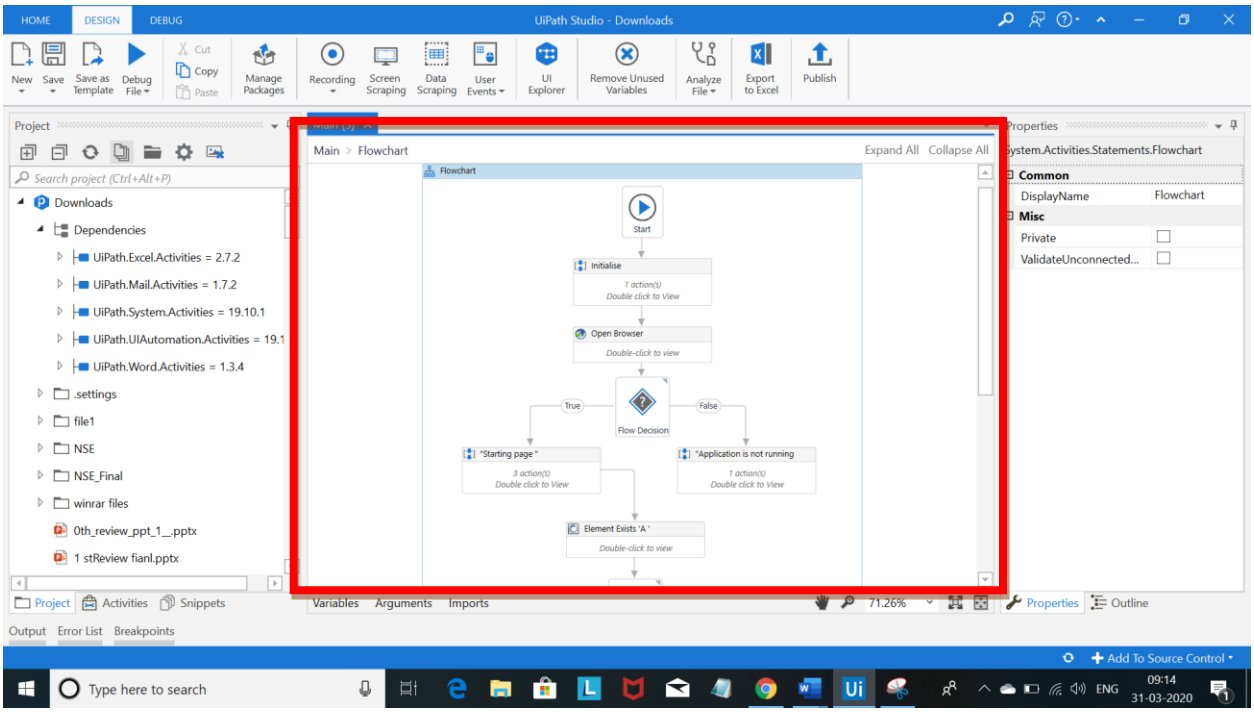


FIGURE 8.1.2 WORKSPACE

Properties Pane:

In properties pane, we can give properties and values to components in work flows. Also we can create variables by hitting ctrl + K key in output textbox.

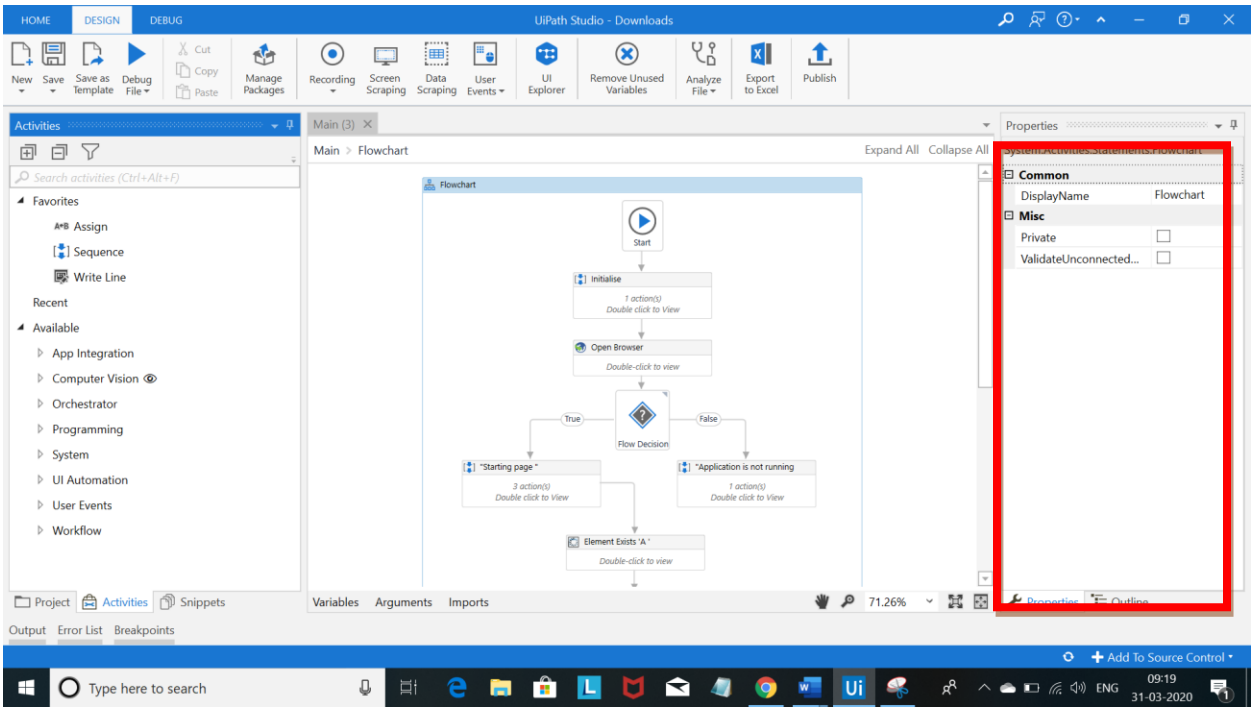


FIGURE 8.1.3 PROPERTIES PANE

These three are the important panes in UiPath. The other panes are Output Pane, where we could see the Outputs, Logs and Error Messages and Outline pane, which shows the outline of the project.

Record and Playback:

UiPath has Record and Playback feature. This feature records the actions by humans and makes it as a sequence and makes it an automated process. There are 4 types of Recordings available in UiPath

- Basic Recording
- Desktop Recording
- Web Recording
- Citrix Recording

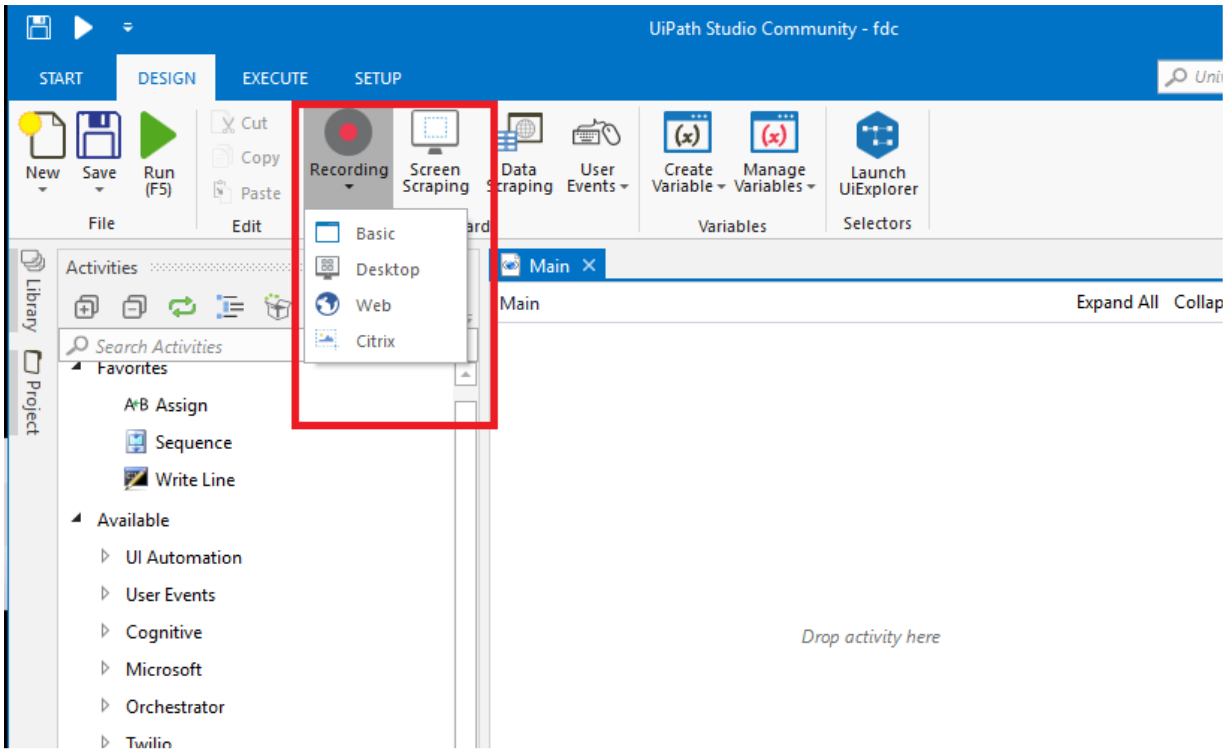


FIGURE 8.1.4 RECORGING TYPES

Screen Scraping and Data Scraping:

Scraping is getting specific data from a page or application. Screen Scraping is used to scrape data from applications and web pages. Data Scraping is scraping data that is repetitive in structure like query results in Google Search Engine or any tabular content. It has a special wizard called Data Scraping Wizard that helps to scrape data. Data Scraping is mainly used in web pages.

UiExplorer:

UiExplorer has details about the user interface components and selectors. A selector is basically a plain text that is used to find a particular UI element among the running applications.

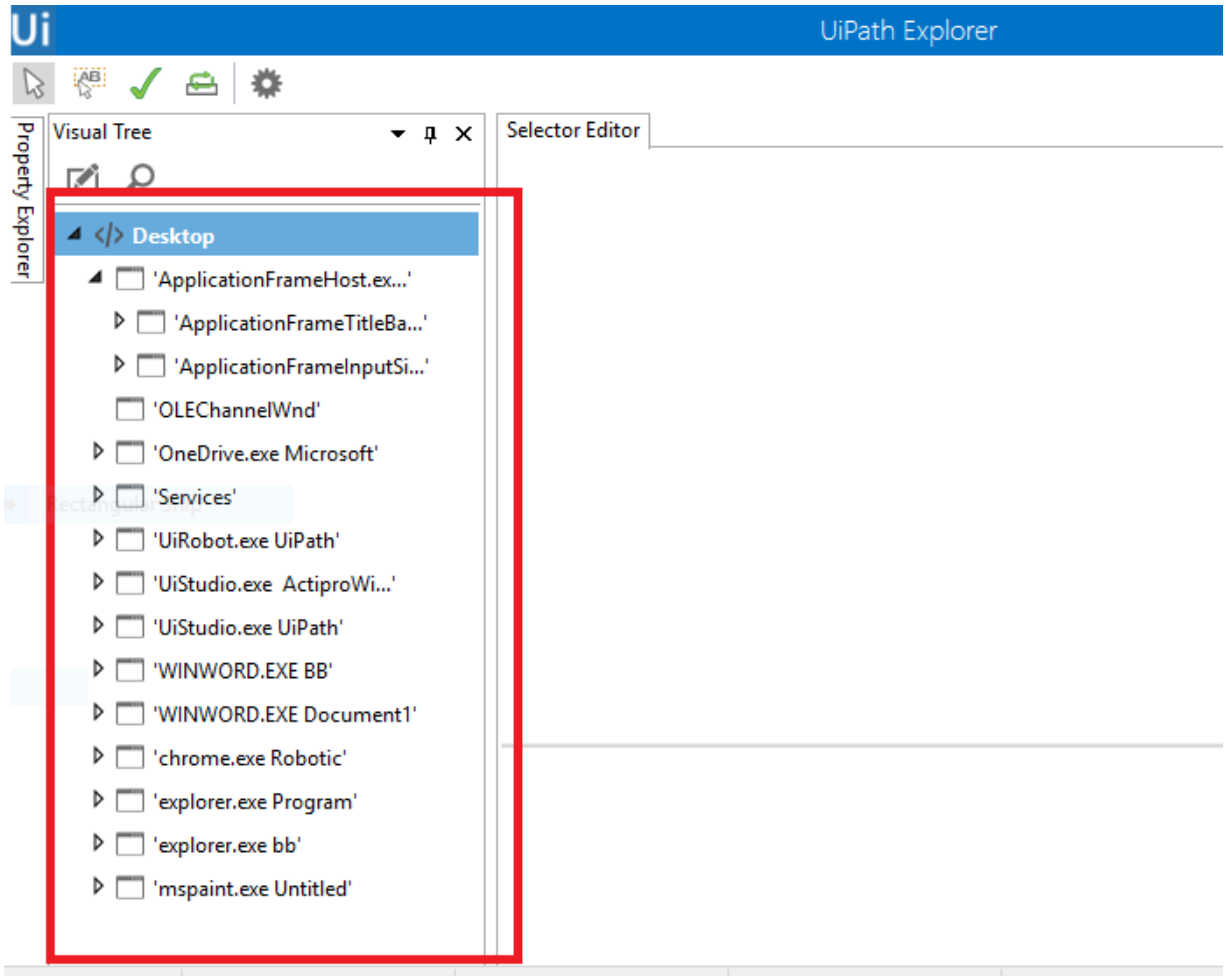


FIGURE 8.1.5 UI EXPLORER

Run, Debug and Breakpoints:

Run is used to run the Software Robot in UiPath environment. Debug is used to analyses the workflows step-by-step. Break Point is used to pause the debugging at a particular step. Slow step is used to execute the bot little slower.

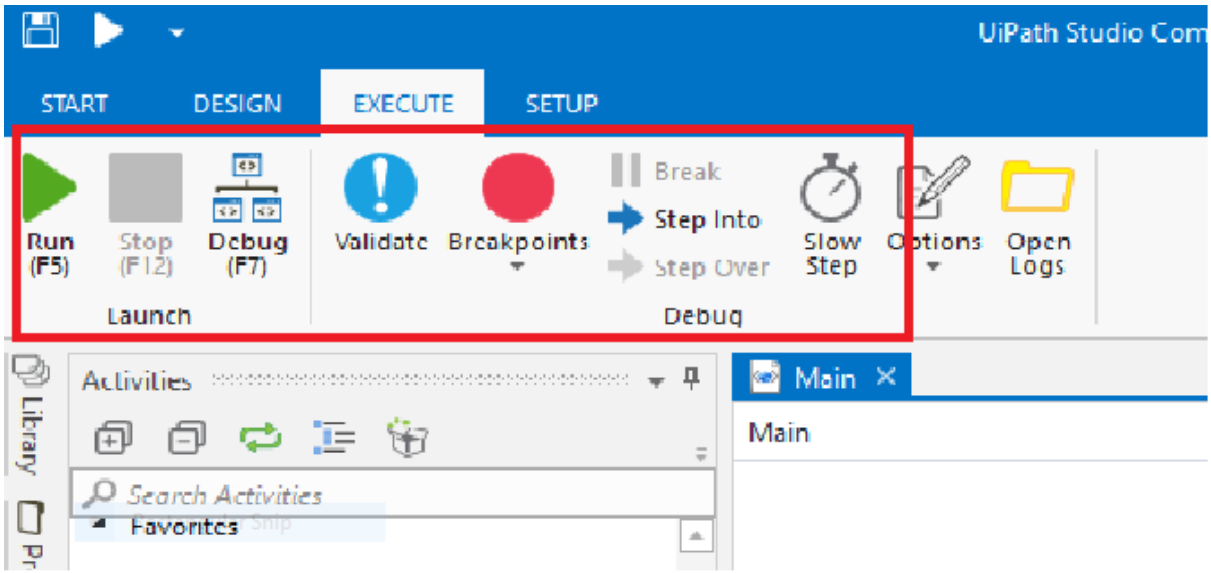


FIGURE 8.1.6 RUN, DEBUG AND BREAKPOINTS

CHAPTER 9

CONCLUSION AND FUTURE ENHANCEMENT

9.1 CONCLUSION

In Hotel Booking process, we get customer details via agent like what are the specification they need and what type of rooms they need based on the cost. After that agent will upload their information in excel to automate. If any changes needed, it is said to the agent and then to the customer. Bot will enter the customer details in web and then it will be given certain range of cost to estimate in the web. It will specify the hotels in the web based on the requirements and it will book automatically. For multiple customers it will book automatically in the web without help of humans. It is useful for human effort and peoples those who are not educated and they want to book a room in specific place they can trust the agent to book this process and for agent it will not be difficult to book line by line using this web automation. Finally, after booking of rooms the respective customers will receive mail or message through automation and those who are not having mail or phone, agent will contact them with this confirmation of booking. Uipath and excel automation is done.

9.2 FUTURE ENHANCEMENT

Web automation for booking hotels via Bot is done by using the UiPath tool with the respective packages. We planned for voice recognition as future development and without any help of excel or agent. By using voice automation the rooms will be booked through the details given by the customer themselves and then confirmation mail will be sent automatically through voice specification. But the UiPath voice recognition is not yet enabled for booking process.

CHAPTER 10

APPENDIX

10.1 SOURCE CODE

<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Enter a destination or property' name='q-destination' type='text' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Check-in' idx='2' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Check-out' idx='2' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='close' idx='2' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl tag='BUTTON' type='button' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl id='qf-0q-rooms' tag='SELECT' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl id='qf-0q-room-0-adults' tag='SELECT' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl id='qf-0q-room-0-children' tag='SELECT' />

<html app='chrome.exe' title='Hotels.com India' /> <webctrl id='qf-0q-room-0-child-0-age' tag='SELECT' />

<html app='chrome.exe' title='Hotels.com India' />
<webctrl tag='BUTTON' type='submit' />

<html app='chrome.exe' title='Hotels.com - hotels in Coimbatore, Tamil Nadu, India' />
<webctrl aaname='Choose Room' idx='1' />

<html app='chrome.exe' title='Hotels.com - hotels in Coimbatore, Tamil Nadu, India' />
<webctrl aaname='Choose Room' idx='1' />

<html app='chrome.exe' title='Vivanta Coimbatore (Coimbatore, India), Coimbatore hotel discoun*' />
<webctrl aaname='See availability' idx='3' />

<html app='chrome.exe' title='Vivanta Coimbatore (Coimbatore, India), Coimbatore hotel discoun*' />
<webctrl aaname='Book' />

<html app='chrome.exe' title='WelcomHotel Coimbatore-Member ITC Hotel Group (Coimbatore, India*' />
<webctrl aaname='Pay online' idx='2' />

<html app='chrome.exe' title='Hotels.com India' />
<webctrl aaname='Step 1: Room details' parentid='room-details-header' tag='SPAN' />

<html app='chrome.exe' title='Hotels.com India' />
<webctrl aaname='First name*Please give us the name of one of the people staying in this room.' name='shoppingCartOrderDetails.travelDetails[0].hotelData.roomDetails[0].roomType.roomOccupations[0].firstName' type='text' />

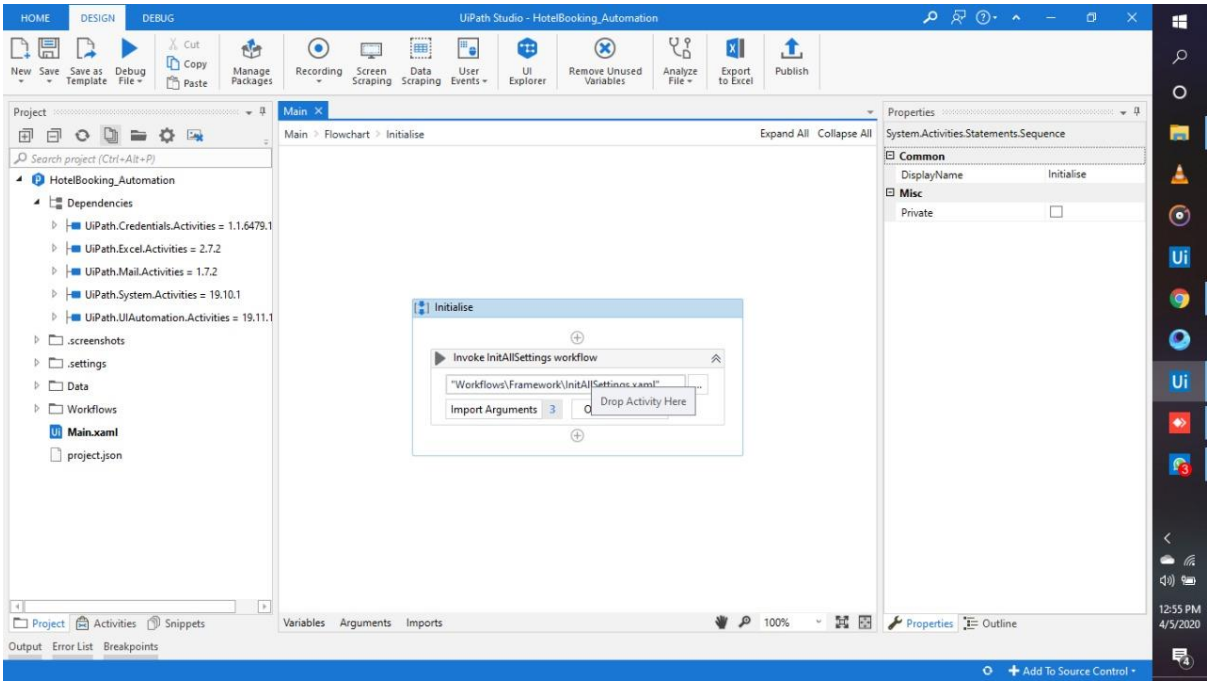
<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Last name*' name='shoppingCartOrderDetails.travelDetails[0].hotelData.roomDetails[0].roomType.roomOccupations[0].lastName' type='text' />

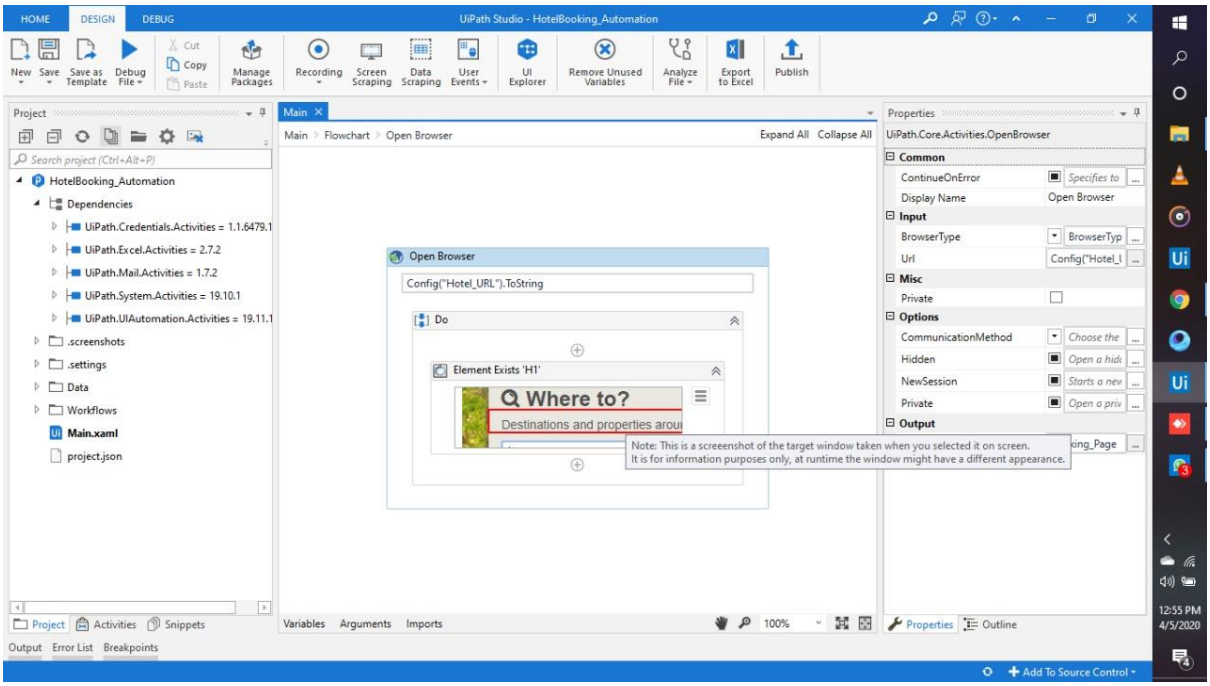
<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Email address*Your confirmation email goes here' name='bookingContact.contactDetails.emailAddress' type='email' />

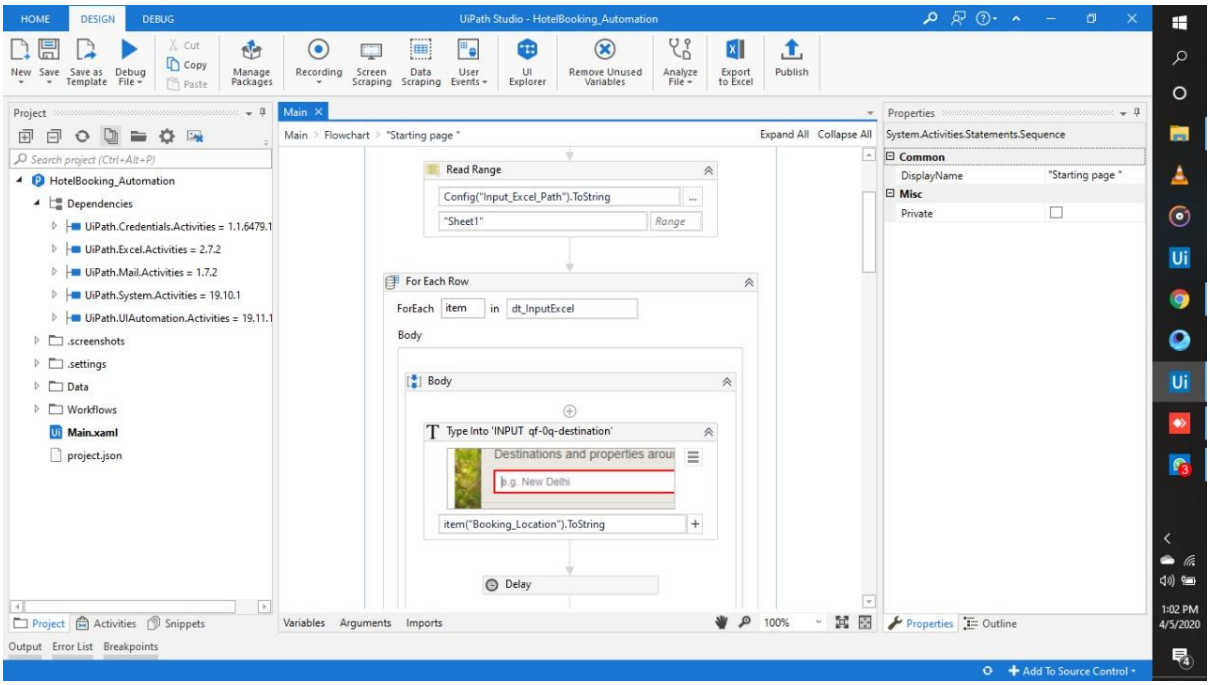
<html app='chrome.exe' title='Hotels.com India' /> <webctrl aaname='Mobile number*We’ll only contact you in an emergency' name='bookingContact.contactDetails.phoneNumber' type='tel' />

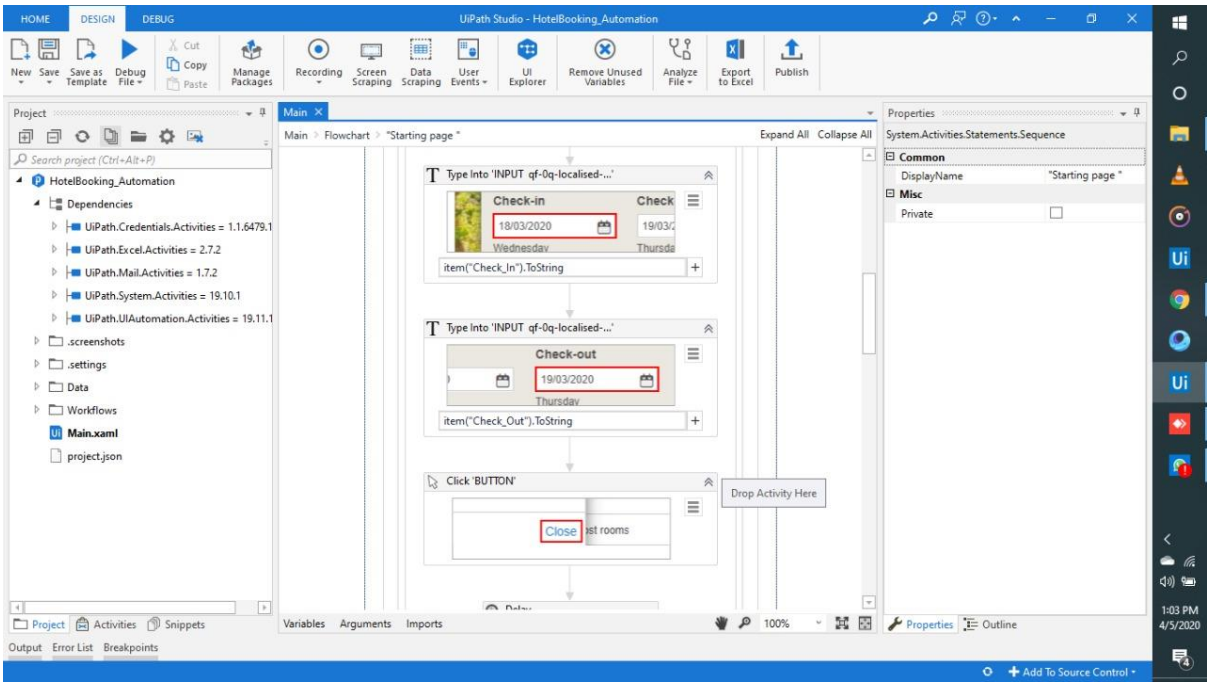
10.2 SCREEN SHOTS:

INPUT:






HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
"Starting page "
Expand All
Collapse All
Properties
System.Activities.Statements.Sequence
Common
DisplayName
"Starting page "
Misc
Private
Read Range
Config("Input_Excel_Path").ToString
"Sheet1"
Range
For Each Row
ForEach
item
in
dt_InputExcel
Body
Type Into 'INPUT qf-0q-destination'
Destinations and properties arou
e.g. New Delhi
item("Booking_Location").ToString
Delay
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
.settings
Data
Workflows
Main.xaml
project.json
Variables
Arguments
Imports
100%
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
"Starting page "
Expand All
Collapse All
Properties
System.Activities.Statements.Sequence
Common
DisplayName
"Starting page "
Misc
Private
Type Into 'INPUT qf-0q-localised-...'
Check-in
18/03/2020
Wednesday
item("Check_In").ToString
Type Into 'INPUT qf-0q-localised-...'
Check-out
19/03/2020
Thursday
item("Check_Out").ToString
Click 'BUTTON'
Close
Drop Activity Here
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
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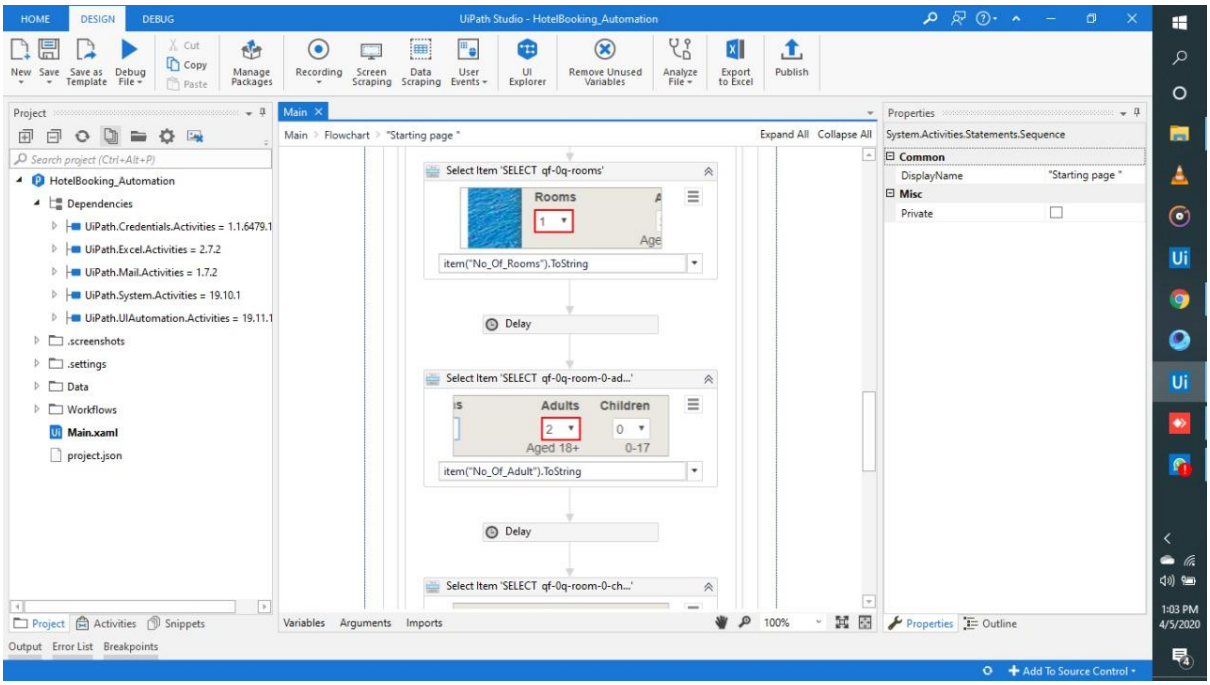
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
"Starting page "
Expand All
Collapse All
Properties
System.Activities.Statements.Sequence
Common
DisplayName
"Starting page "
Misc
Private
Select Item 'SELECT qf-0q-rooms'
Rooms
Age
item("No_Of_Rooms").ToString
Delay
Select Item 'SELECT qf-0q-room-0-ad...'
Adults
Children
Aged 18+
0-17
item("No_Of_Adult").ToString
Delay
Select Item 'SELECT qf-0q-room-0-ch...'
HotelBooking_Automation
Dependencies
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UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
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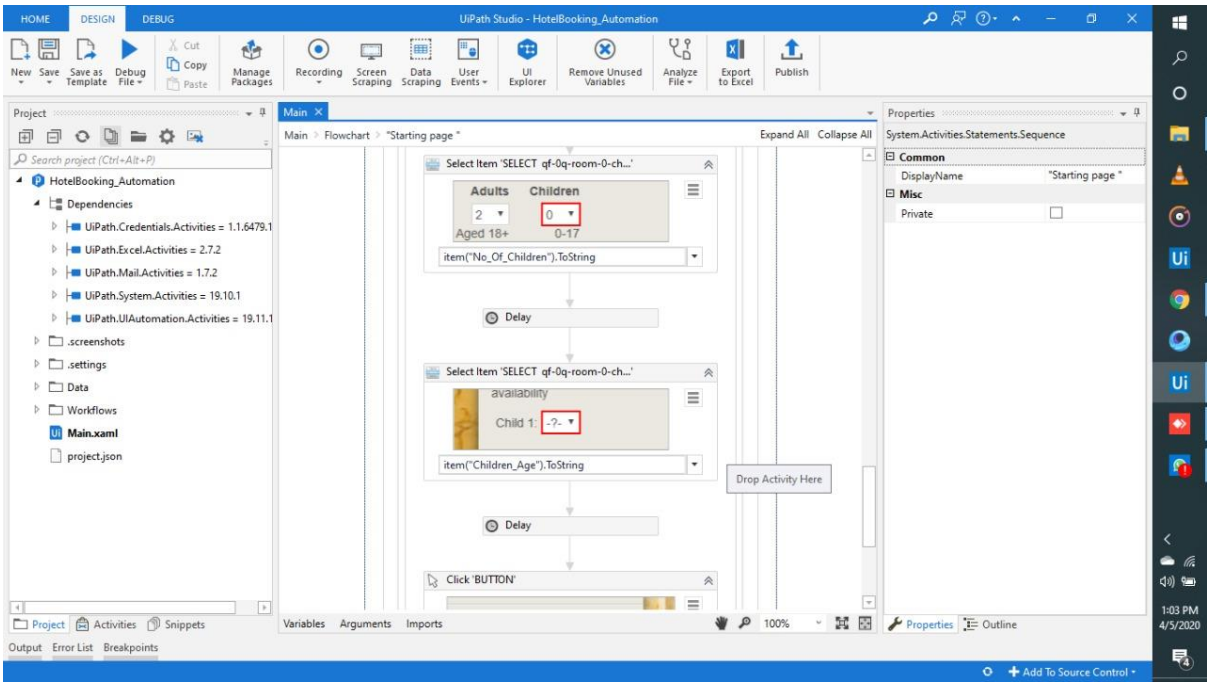
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DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
"Starting page "
Expand All
Collapse All
Properties
System.Activities.Statements.Sequence
Common
DisplayName
"Starting page "
Misc
Private
Select Item 'SELECT qf-0q-room-0-ch...'
Adults
Children
Aged 18+
0-17
item("No_Of_Children").ToString
Delay
Select Item 'SELECT qf-0q-room-0-ch...'
availability
Child 1:
item("Children_Age").ToString
Drop Activity Here
Delay
Click 'BUTTON'
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
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UiPath.UIAutomation.Activities = 19.11.1
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project.json
Variables
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Imports
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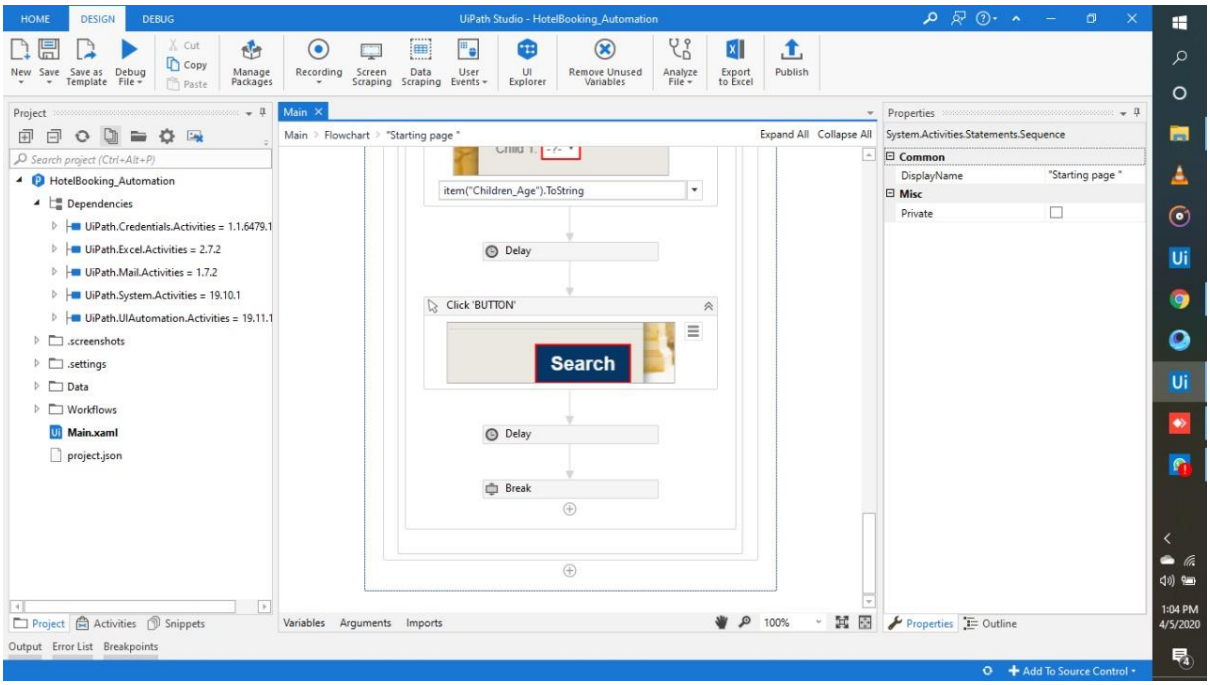
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DEBUG
UiPath Studio - HotelBooking_Automation
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Flowchart
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Expand All
Collapse All
item("Children_Age").ToString
Delay
Click 'BUTTON'
Search
Delay
Break
Properties
System.Activities.Statements.Sequence
Common
DisplayName
"Starting page "
Misc
Private
HotelBooking_Automation
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Main.xaml
project.json
Variables
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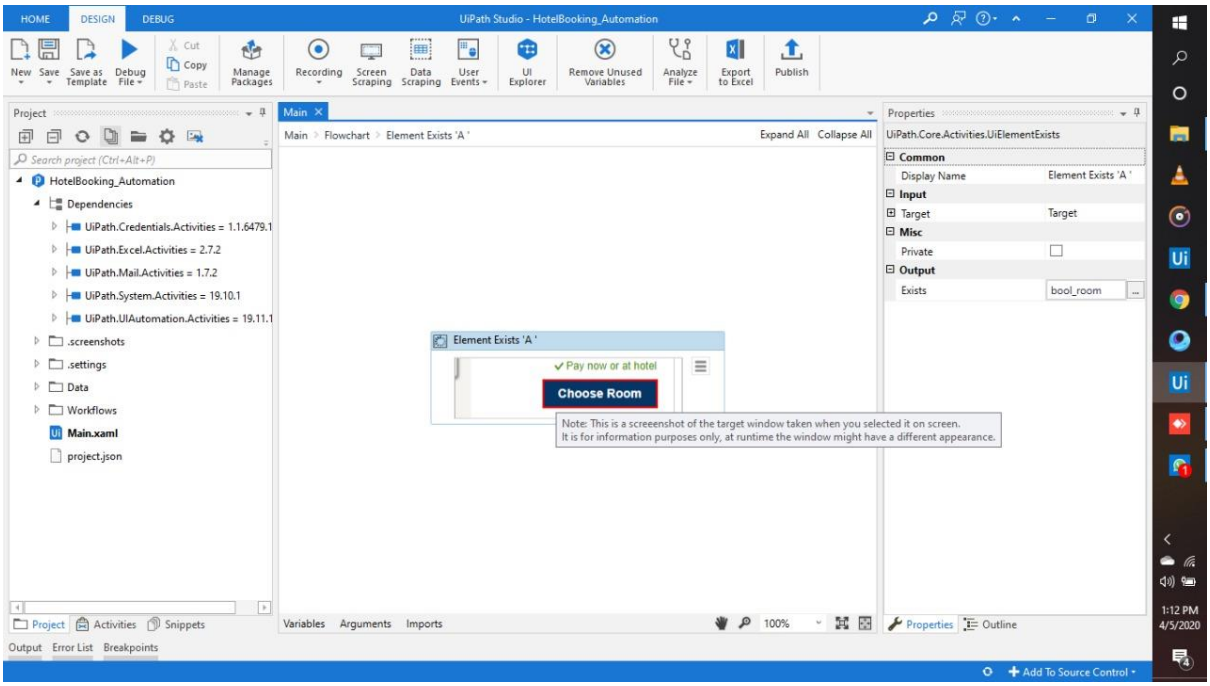
100%
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
Element Exists 'A '
Expand All
Collapse All
Element Exists 'A '
Pay now or at hotel
Choose Room
Note: This is a screeenshot of the target window taken when you selected it on screen.
It is for information purposes only, at runtime the window might have a different appearance.
Properties
UiPath.Core.Activities.UiElementExists
Common
Display Name
Element Exists 'A '
Input
Target
Misc
Private
Output
Exists
bool_room
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
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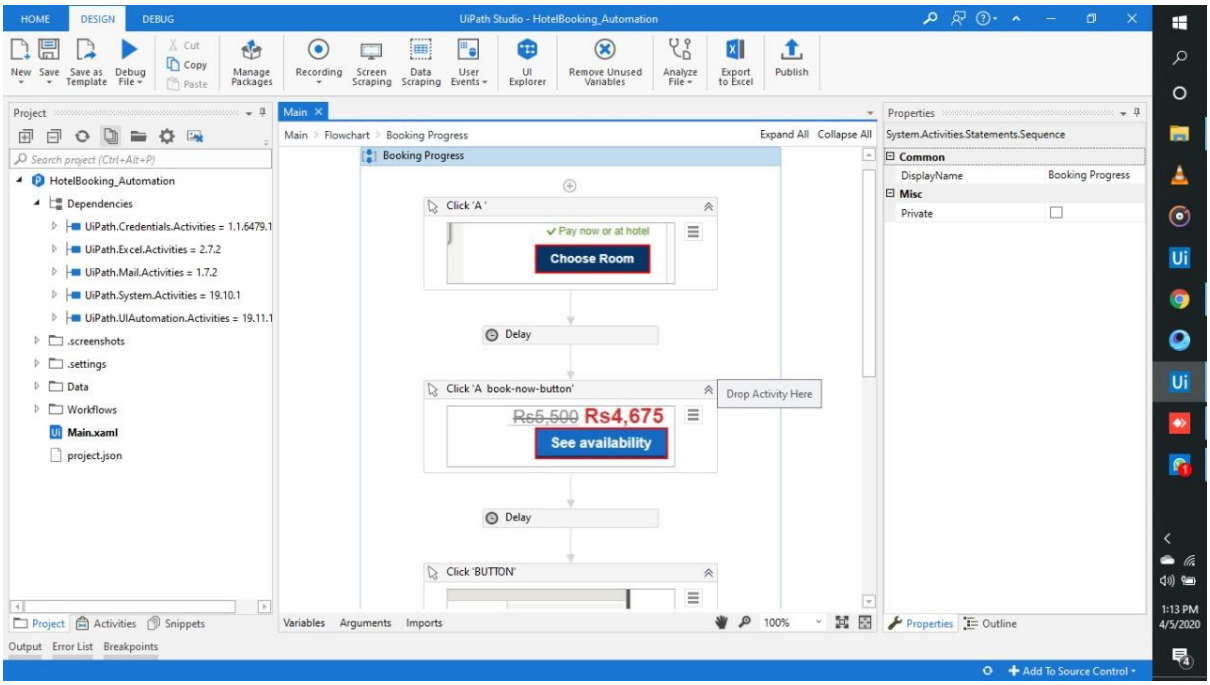
Data
Workflows
Main.xaml
project.json
Variables
Arguments
Imports
100%
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
Booking Progress
Expand All
Collapse All
Booking Progress
Click 'A '
Pay now or at hotel
Choose Room
Delay
Click 'A book-now-button'
Drop Activity Here
Rs5,500 Rs4,675
See availability
Delay
Click 'BUTTON'
Properties
System.Activities.Statements.Sequence
Common
DisplayName
Booking Progress
Misc
Private
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
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project.json
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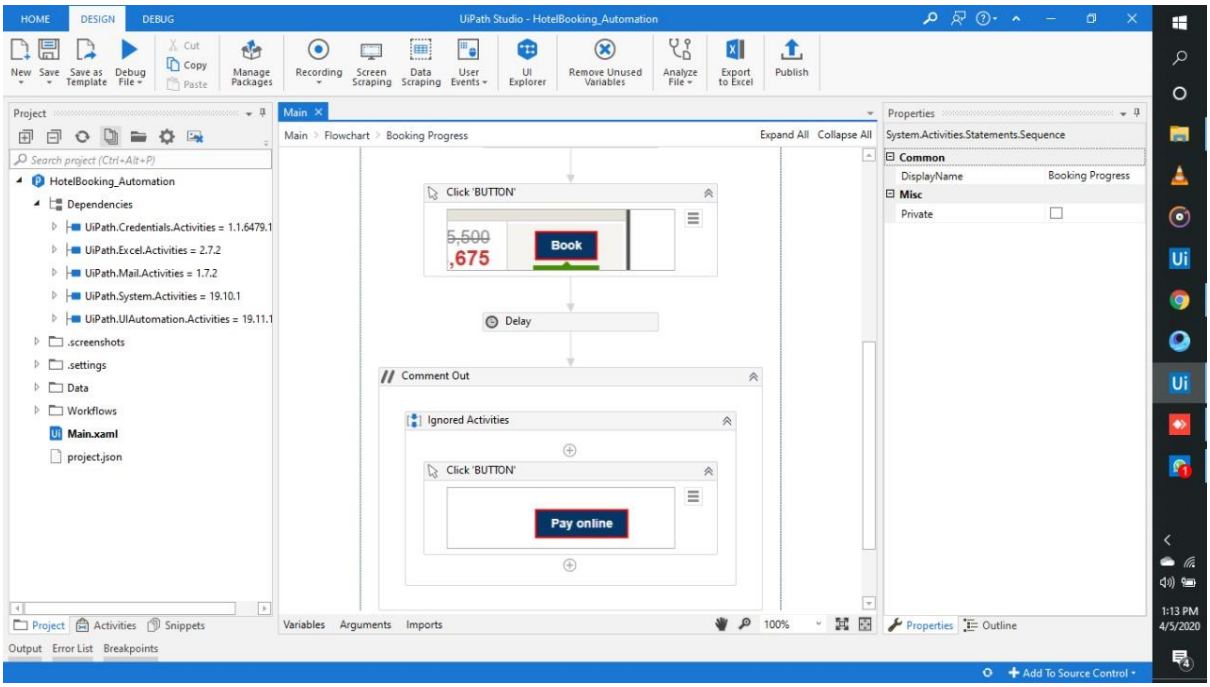
Arguments
Imports
100%
Properties
Outline
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
Main
Flowchart
Booking Progress
Expand All
Collapse All
Click 'BUTTON'
5,500
,675
Book
Delay
Comment Out
Ignored Activities
Click 'BUTTON'
Pay online
Properties
System.Activities.Statements.Sequence
Common
DisplayName
Booking Progress
Misc
Private
HotelBooking_Automation
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UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
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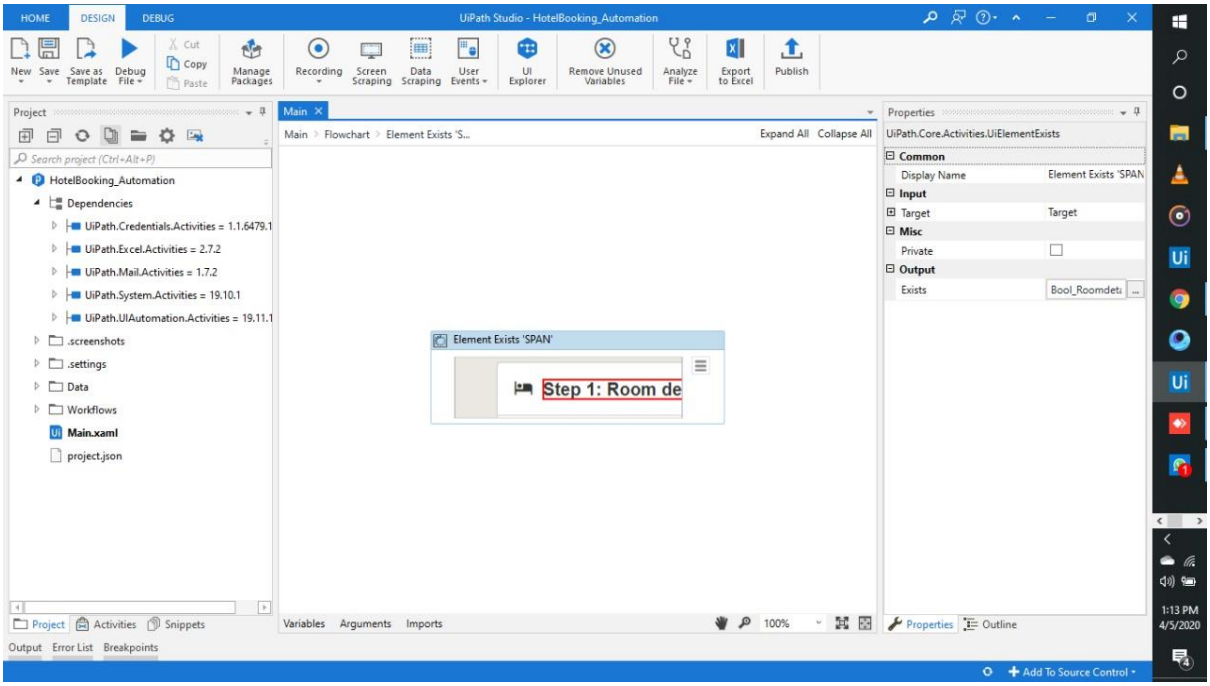
Workflows
Main.xaml
project.json
Variables
Arguments
Imports
100%
Properties
Outline
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
HotelBooking_Automation
Dependencies
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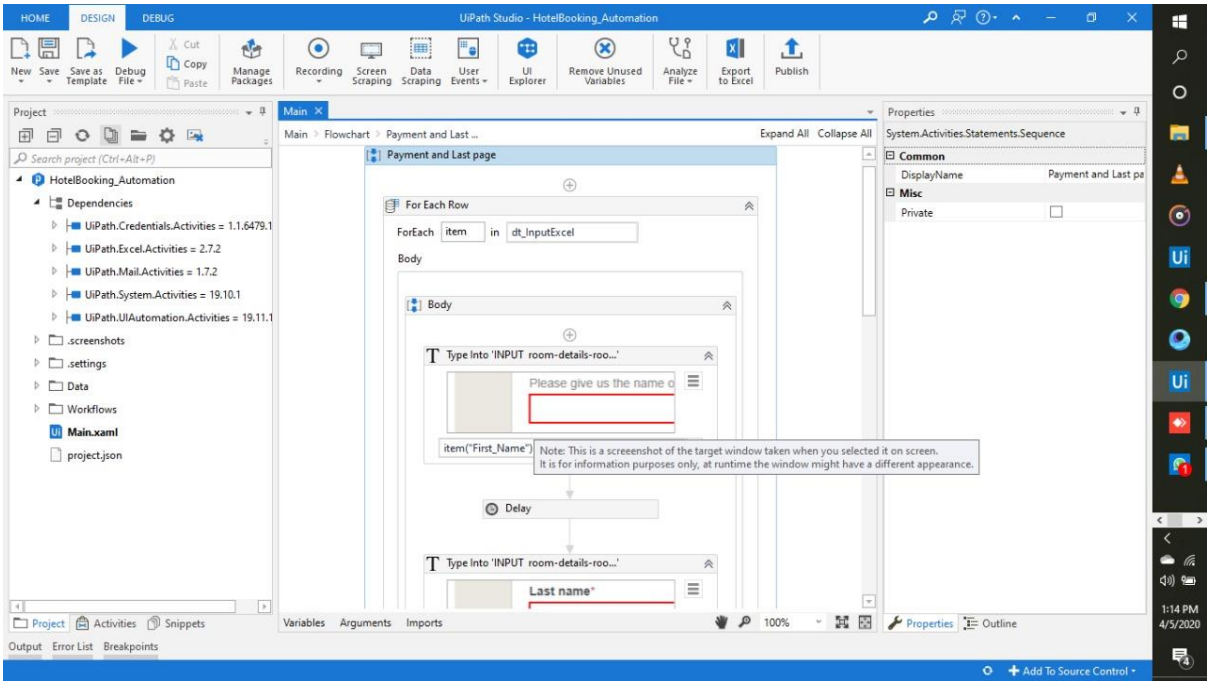
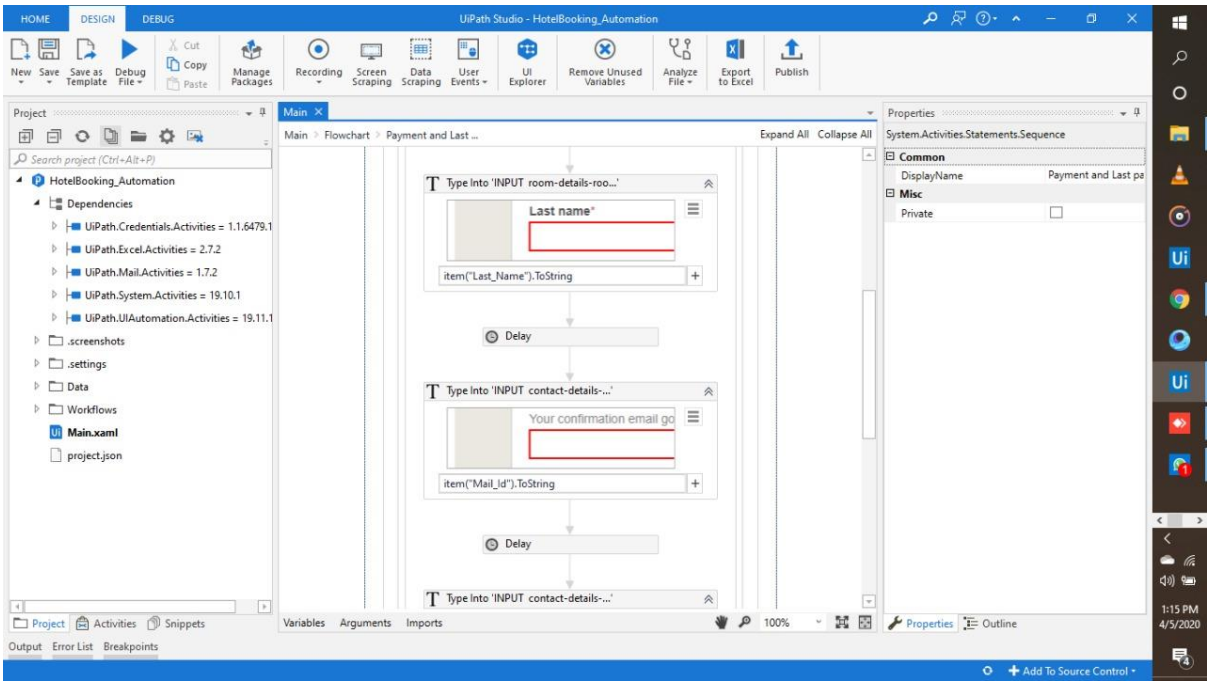
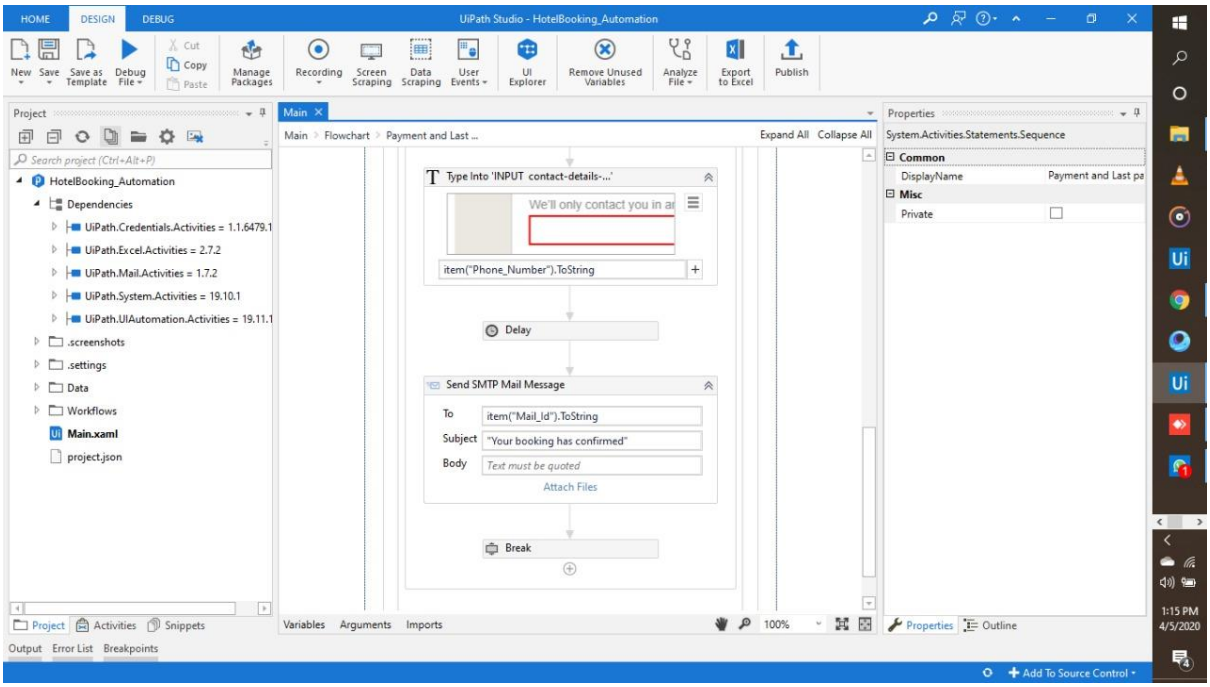
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
.settings
Data
Workflows
Main.xaml
project.json
Main
Flowchart
Element Exists 'S...
Expand All
Collapse All
Element Exists 'SPAN'
Step 1: Room de
Properties
UiPath.Core.Activities.UiElementExists
Common
Display Name
Element Exists 'SPAN
Input
Target
Misc
Private
Output
Exists
Variables
Arguments
Imports
100%
Output
Error List
Breakpoints
Add To Source Control
1:13 PM
4/5/2020


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
.settings
Data
Workflows
Main.xaml
project.json
Main
Flowchart
Payment and Last ...
Expand All
Collapse All
Payment and Last page
For Each Row
ForEach
item
in
dt_InputExcel
Body
Body
Type Into 'INPUT room-details-roo...'
Please give us the name o
item("First_Name")
Note: This is a screeenshot of the target window taken when you selected it on screen.
It is for information purposes only, at runtime the window might have a different appearance.
Delay
Type Into 'INPUT room-details-roo...'
Last name*
Properties
System.Activities.Statements.Sequence
Common
DisplayName
Payment and Last pa
Misc
Private
Variables
Arguments
Imports
100%
Output
Error List
Breakpoints
Add To Source Control
1:14 PM
4/5/2020


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
.settings
Data
Workflows
Main.xaml
project.json
Main
Flowchart
Payment and Last ...
Type Into 'INPUT room-details-roo...'
Last name*
item("Last_Name").ToString
Delay
Type Into 'INPUT contact-details-...'
Your confirmation email go
item("Mail_Id").ToString
Delay
Type Into 'INPUT contact-details-...'
Properties
System.Activities.Statements.Sequence
Common
DisplayName
Payment and Last pa
Misc
Private
Variables
Arguments
Imports
Output
Error List
Breakpoints
Add To Source Control


HOME
DESIGN
DEBUG
UiPath Studio - HotelBooking_Automation
Project
HotelBooking_Automation
Dependencies
UiPath.Credentials.Activities = 1.1.6479.1
UiPath.Excel.Activities = 2.7.2
UiPath.Mail.Activities = 1.7.2
UiPath.System.Activities = 19.10.1
UiPath.UIAutomation.Activities = 19.11.1
.screenshots
.settings
Data
Workflows
Main.xaml
project.json
Main
Flowchart
Payment and Last ...
Type Into 'INPUT contact-details-...'
We'll only contact you in ac
item("Phone_Number").ToString
Delay
Send SMTP Mail Message
To
item("Mail_Id").ToString
Subject
"Your booking has confirmed"
Body
Text must be quoted
Attach Files
Break
Properties
System.Activities.Statements.Sequence
Common
DisplayName
Payment and Last pa
Misc
Private
Variables
Arguments
Imports
Output
Error List
Breakpoints
Add To Source Control

OUTPUT:

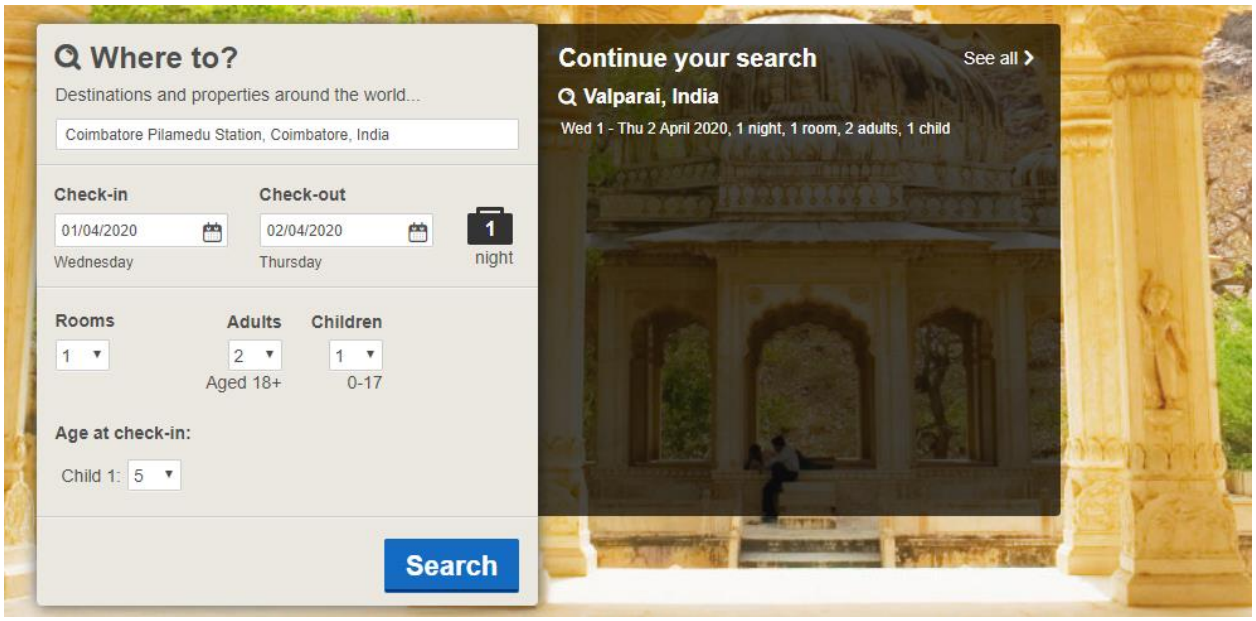
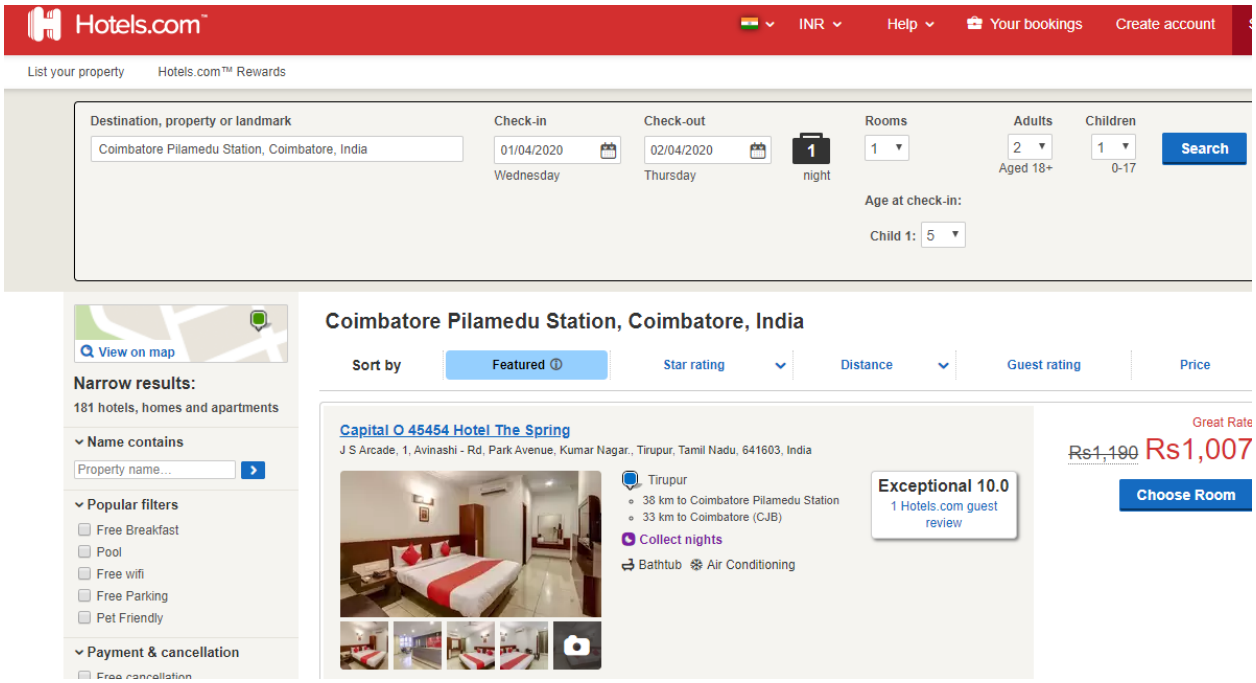


FIGURE 10.2.1 OPEN BROWSER



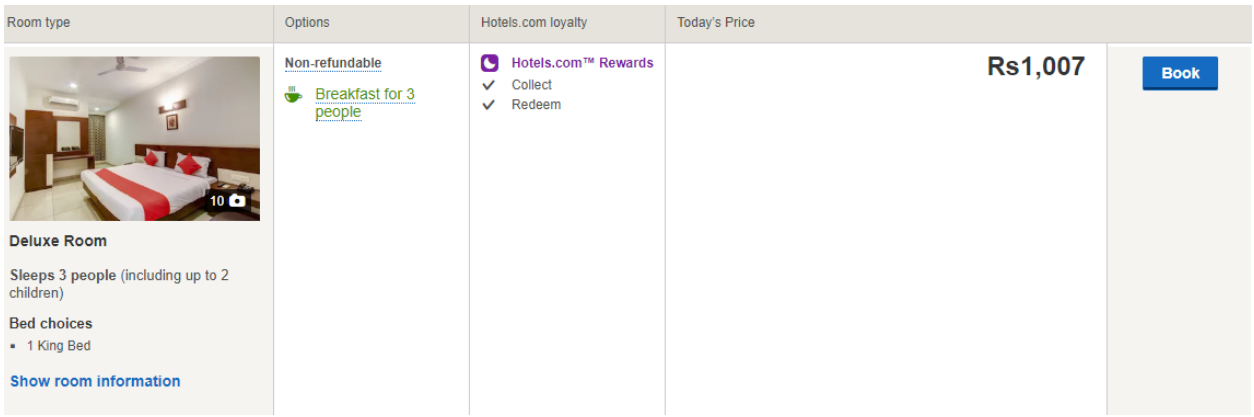
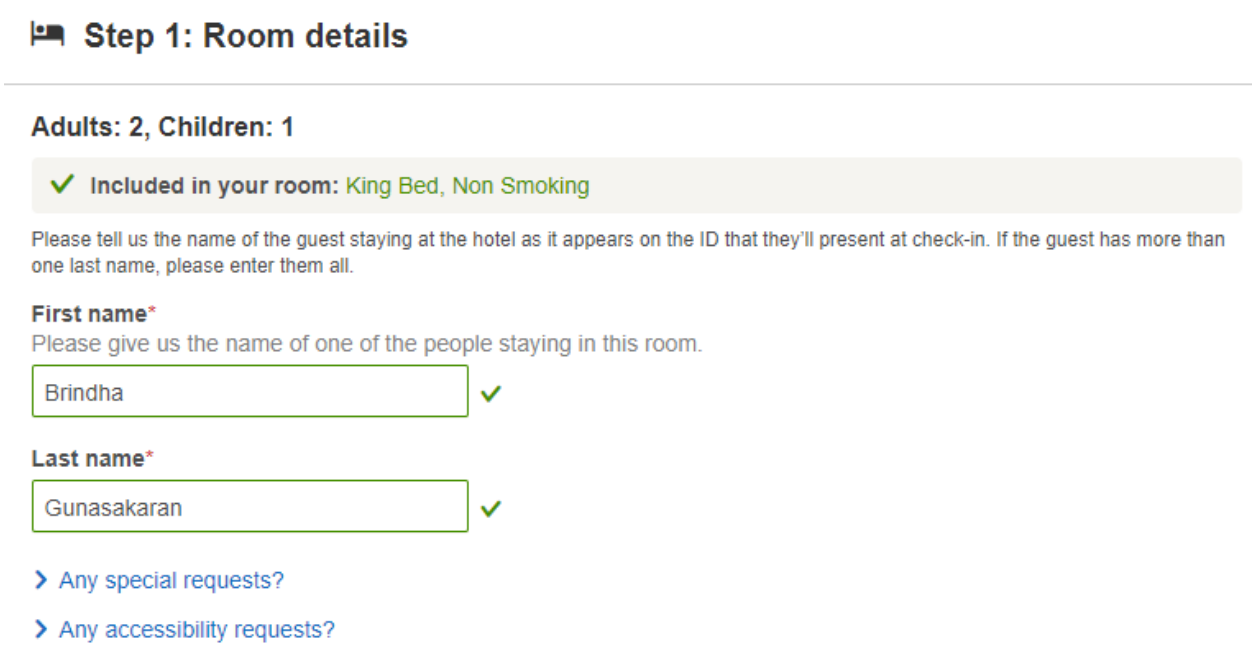


FIGURE 10.2.2 CHECKING ROOMS

FIGURE 10.2.3 DATA SCRAPING



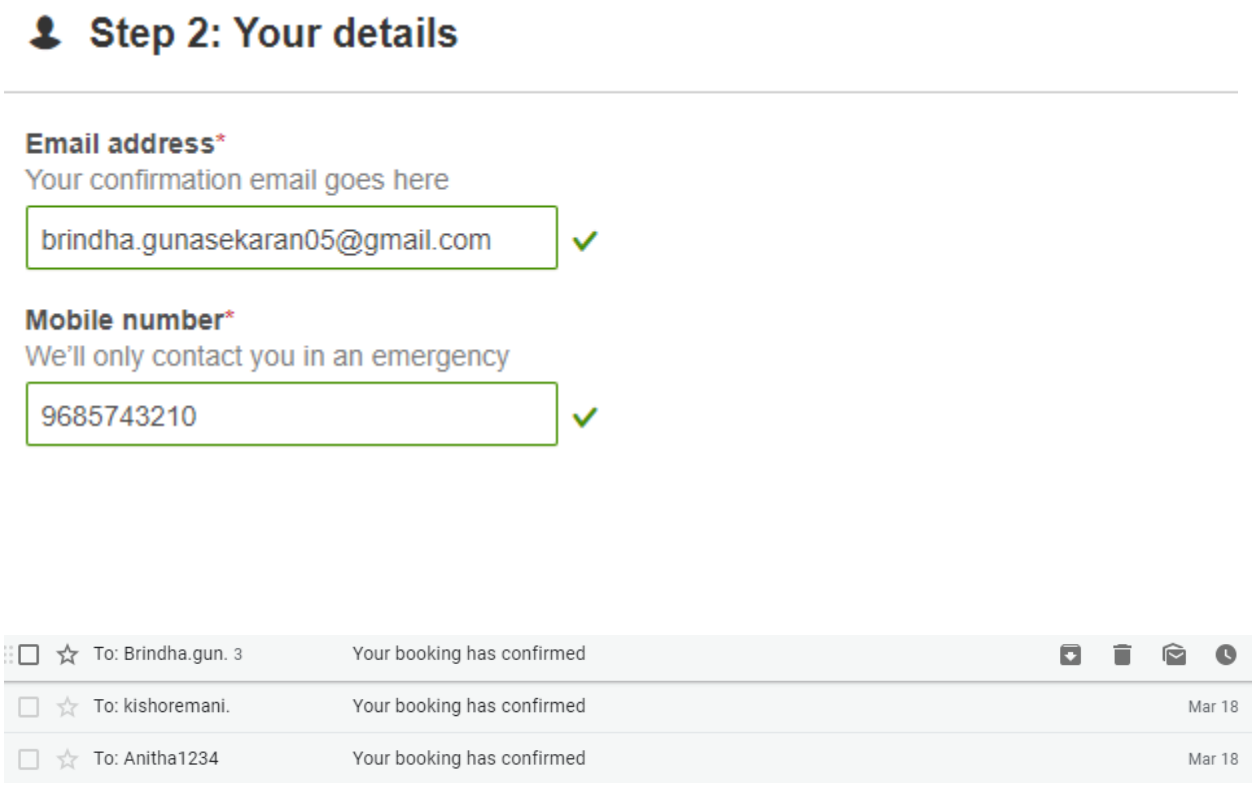


FIGURE 10.2.4 EMAIL NOTIFICATION

CHAPTER 11

REFERENCES

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2.https://www.linkedin.com/pulse/robotic-process-automation-rpa-introduction-beginners-kapil-kathuria - to know about RPA its future implementations.

3.https://static1.squarespace.com/static/567bb0614bf118911ff0bedb/t/58aea4f8ebd1a4c4b9a2ac8/1487840511473/RPA_The_Automation_of_Automation.pdf sample RPA project documentation.

4. https://www.workfusion.com/rpaexpress-faq - Referred to work in each and every icons of UiPath tool.

5. Online Hotel booking for reservation system - Richard bemile.

6. Robotic Process Automation Case Studies for consumers preferred hotel in online booking - Marcussen.

7. Online customer confusion in hotel booking – Mitchell.