

# VIT<sup>®</sup>

## Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

### **CSE2023 - Robotic Process Automation REVIEW 2**

**Project Title:** Ticket Booking Automation Using Voice  
Recognition

**Batch Number** - 10

#### **Team Members :**

Jajapuram Giridhar Reddy - 20BRS1004

Prithviraj Guntha - 20BRS1188

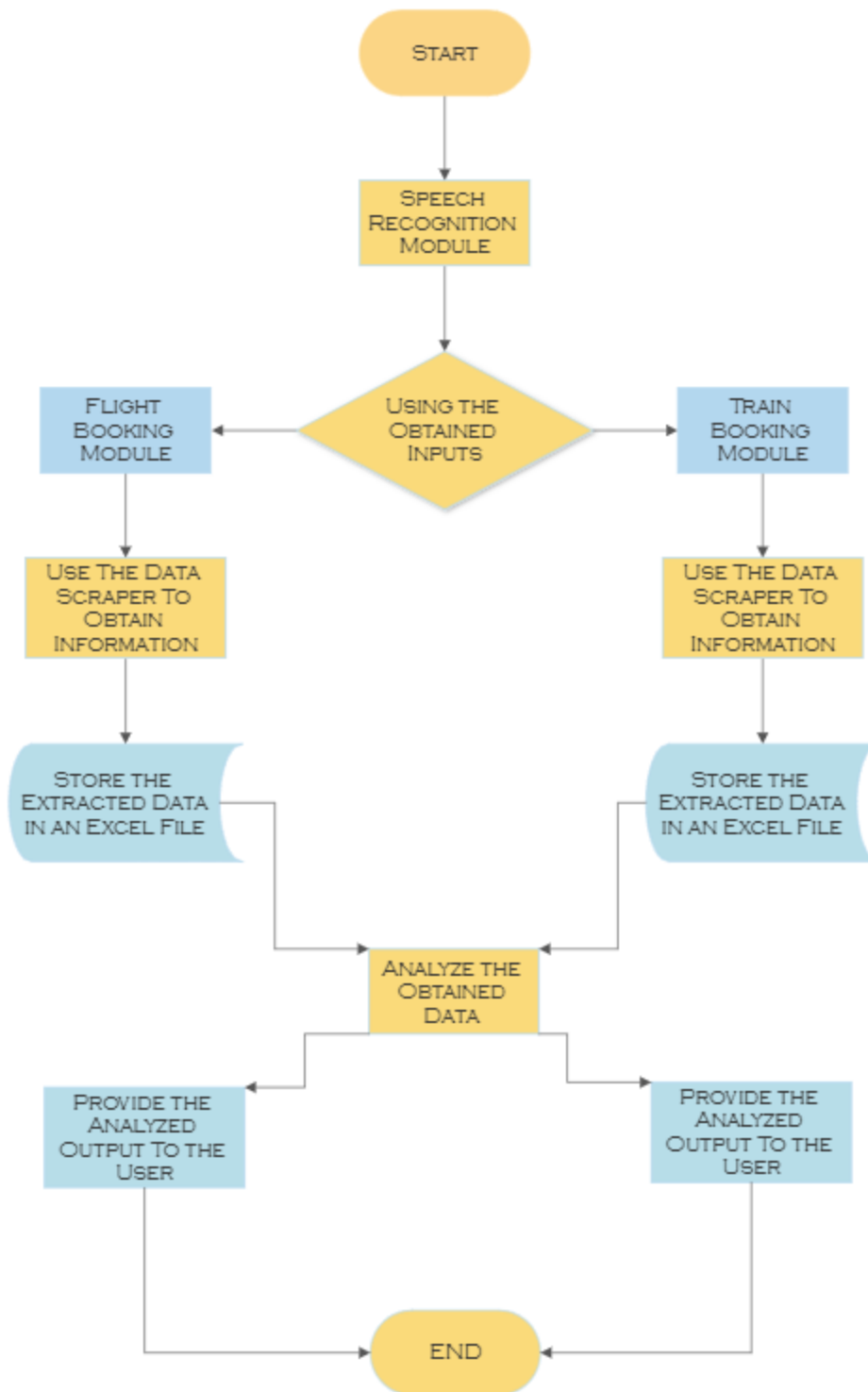
P. Je Sai Kailash - 20BRS1208

## **Introduction and Abstract Of The Project**

Our project, automatic ticket booking using voice recognition would help users to book train tickets seamlessly. The user would first tell the source and destination rather than type them out, then the user would also give other information like date and seat type to the computer. Then, we would use python to implement a speech recognition algorithm to get the data spoken by the user. We would already have pre recorded data of sources and destinations which would be saved in an excel sheet. The automation would then search and match the data given by the user with the pre recorded data that's present. After the correct match is found, the automation would store that particular information in the form of a string. The automation would then open the browser, search for the website "IRCTC" and then click on to book a ticket. The automation would automatically enter the source and destination along with the other information like date and seat preference. Then the automation would search through the list of trains and try to book the ticket which would match the preference of the user. The automation would try to compare between different fare prices and try choosing the cheapest of all the available fares. Once the best option is chosen, the automation would then move on to book the required ticket. The booked ticket would then be sent to the user by email or by phone number depending on how that particular user has registered in the IRCTC portal.

## **System Architecture**

The Aim of our Project is to be providing the user the best mode of way to travel. We store all the data after extracting in one place and later take the best of them through an AI process and then display the best options for the user to travel to his required destination. The details of the journey like Source, Destination and Travel Date are taken through voice input so that the user will have a seamless no interaction experience and he can control everything just through his voice.



## Modules Implemented

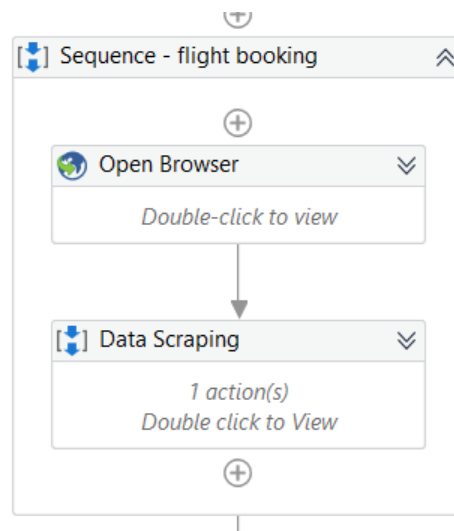
### 1. Input module:

This module is dedicated to take the details from the user like Source and Destination. For this, we start with INPUT DIALOGUE ACTIVITY to take the details i.e., Source, Destination, Travel date, preferred type for class of the train. The speech recognition module will provide the details through an excel sheet, so instead of the input dialogue box activity, we use READ RANGE ACTIVITY in order to get the details of the passenger through that excel sheet.

Then we use OPEN BROWSER ACTIVITY to open the browser and go to the link to makemytrip website. In that the details given will automatically be typed into the website and then the further automation is continued in the data extraction module.

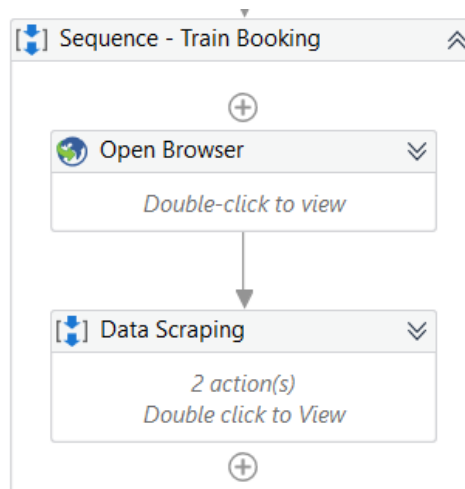
### 2. Flight Details Automation Module

This module will automate the process of entering the details of the user i.e., Source, Destination and travel date into the appropriate fields of the website and click the search button and the data extraction module will continue the process of extracting the data for getting prices of the flights. CLICK and TYPE INTO ACTIVITIES are used to type the details acquired from the input module into the appropriate fields in the website and pressing the search button. And then the data extraction module runs and will return to the train automation module.



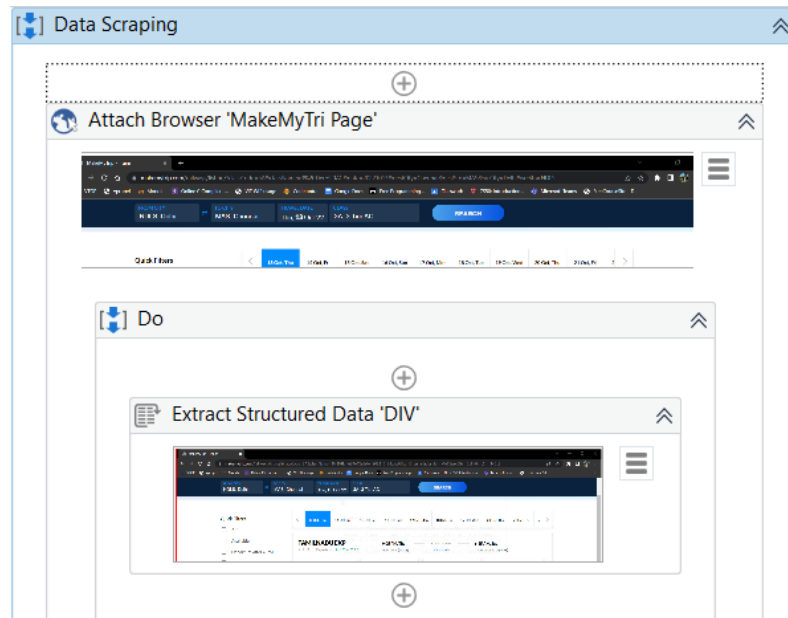
### 3. Train Details Automaton Module:

In this module we use the obtained input like Source, Destination and Date to get the details of the trains that are available for the journey and with the help of the Data Extraction module we get the prices of the train tickets. The CLICK ACTIVITY is used to click the appropriate fields and a TYPE INTO ACTIVITY is used to type the details of source and destination in the specified field and then a click activity is used to click the search button then the data extraction module is implemented next.



#### 4. Data Extraction Module:

This module is to perform the extraction of details from the website and store it into an excel. From flights, the details that this module will extract are Flight name, Departure time, Arrival time, price of the ticket. And from trains, the details extracted would be Train name, Train number, Departure time, Journey time, arrival time, price of the ticket.



## **Modules Yet to be Implemented**

### **1. Speech Recognition module**

From this module we are expecting the machine to run a speech recognition algorithm to identify the details given by the user. Initially an excel is maintained to store all the cities and places that are having airport or railway station and when the user gives the source and destination places then the algorithm will store the details in an excel and this excel is used by the UiPath in order to automate the process of extracting the prices and providing the best prices to the user.

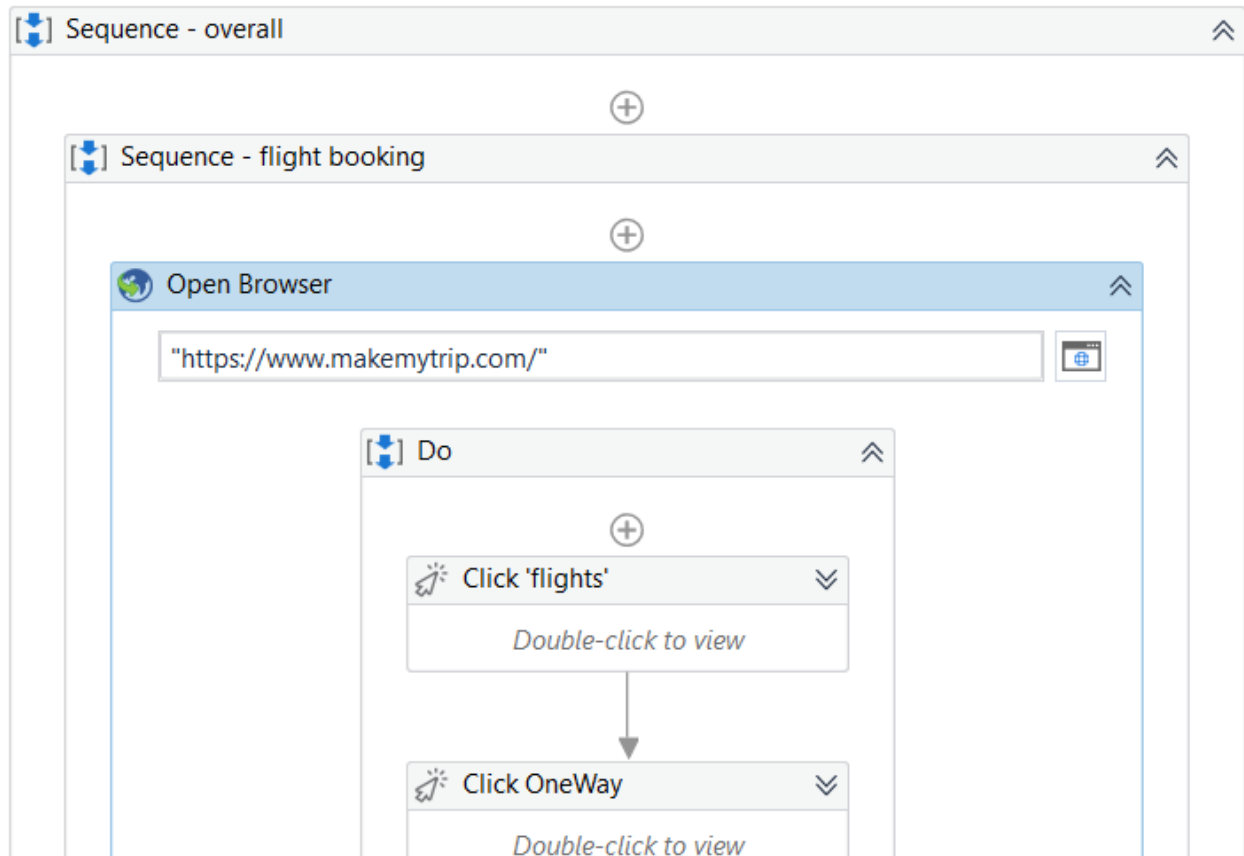
### **2. Analyser Module**

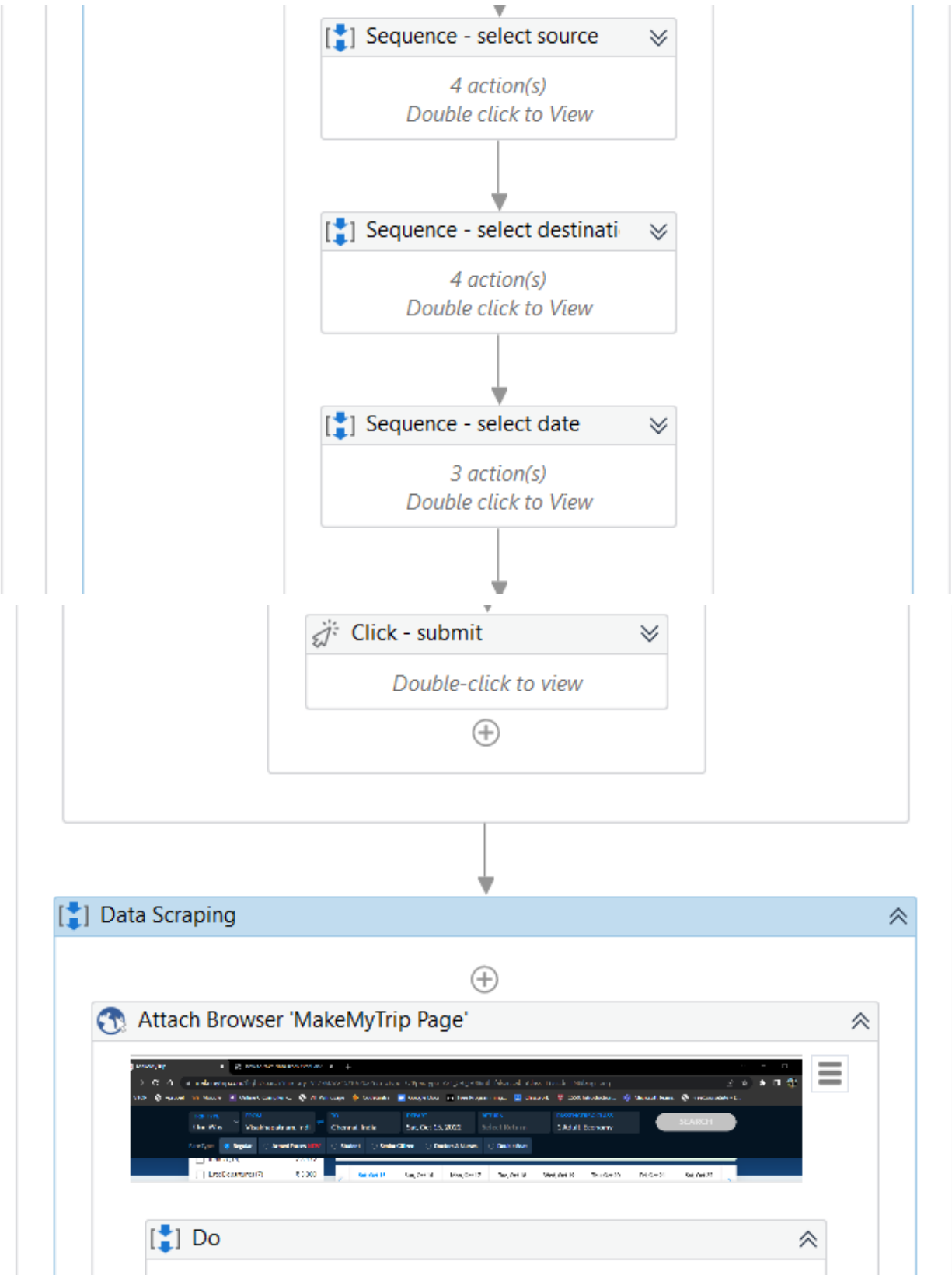
This module is expected to compare the prices of flights and trains separately and display the best three cheapest prices to the user either by email.

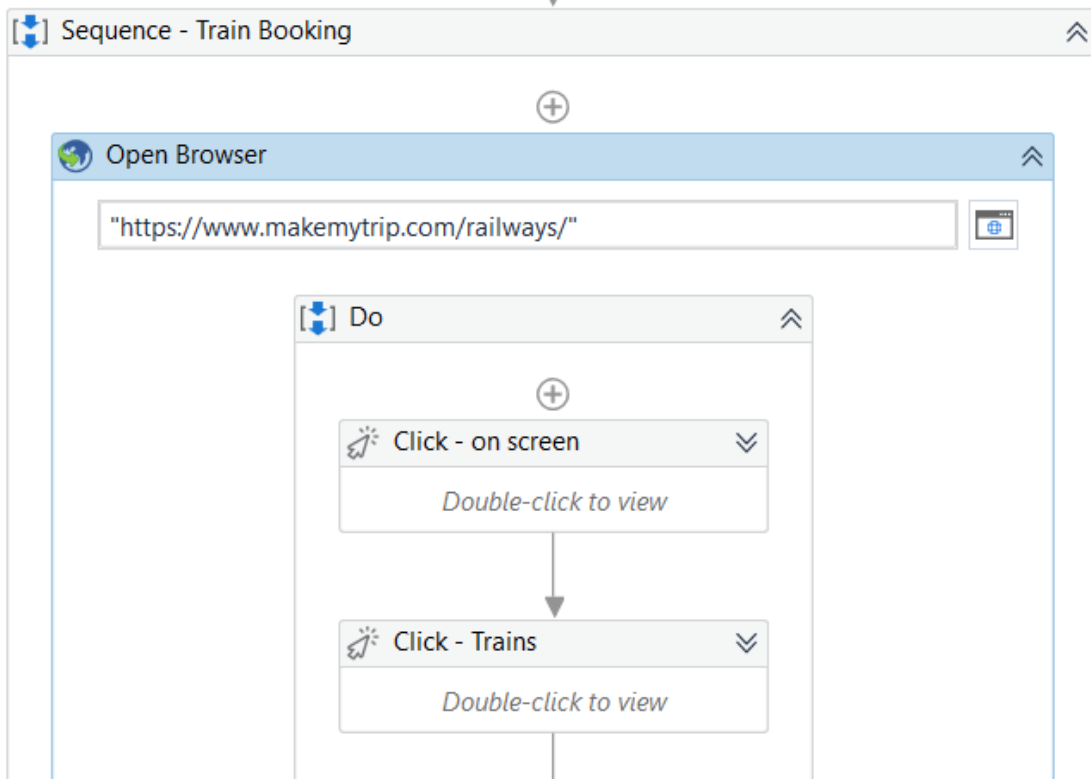
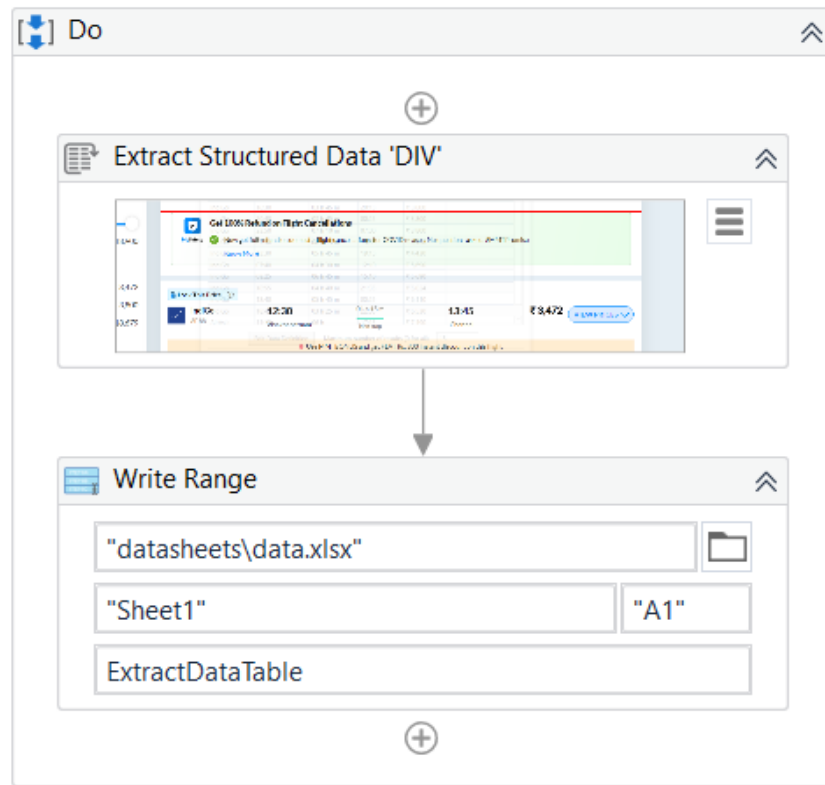


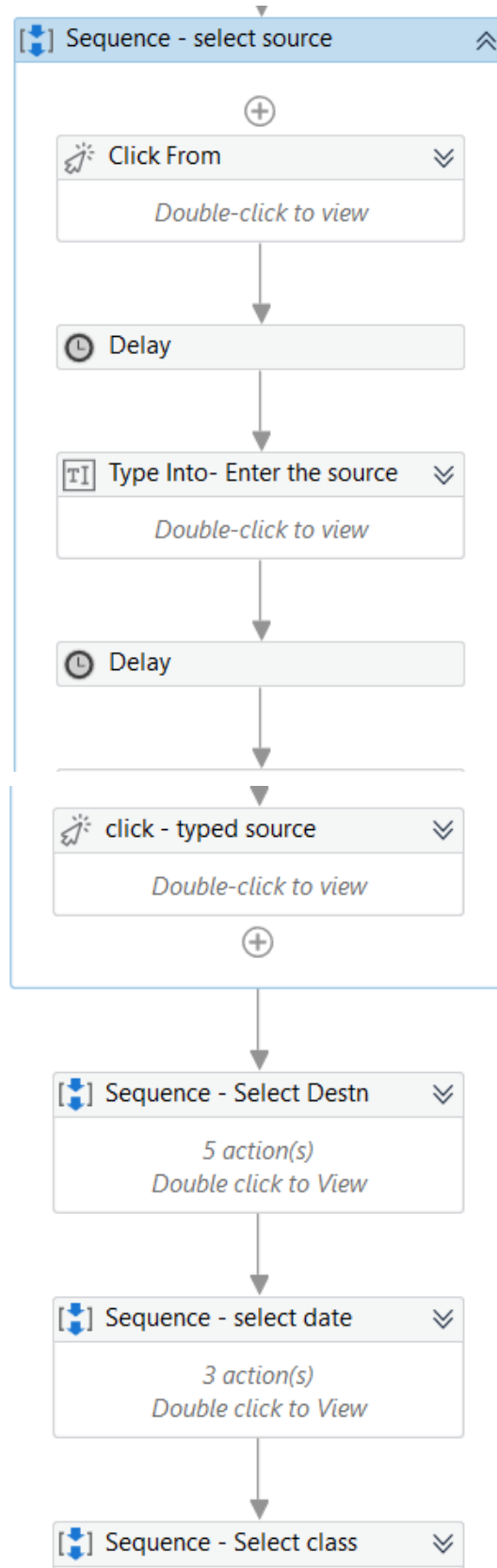
## Results And Screenshots of Modules Implemented

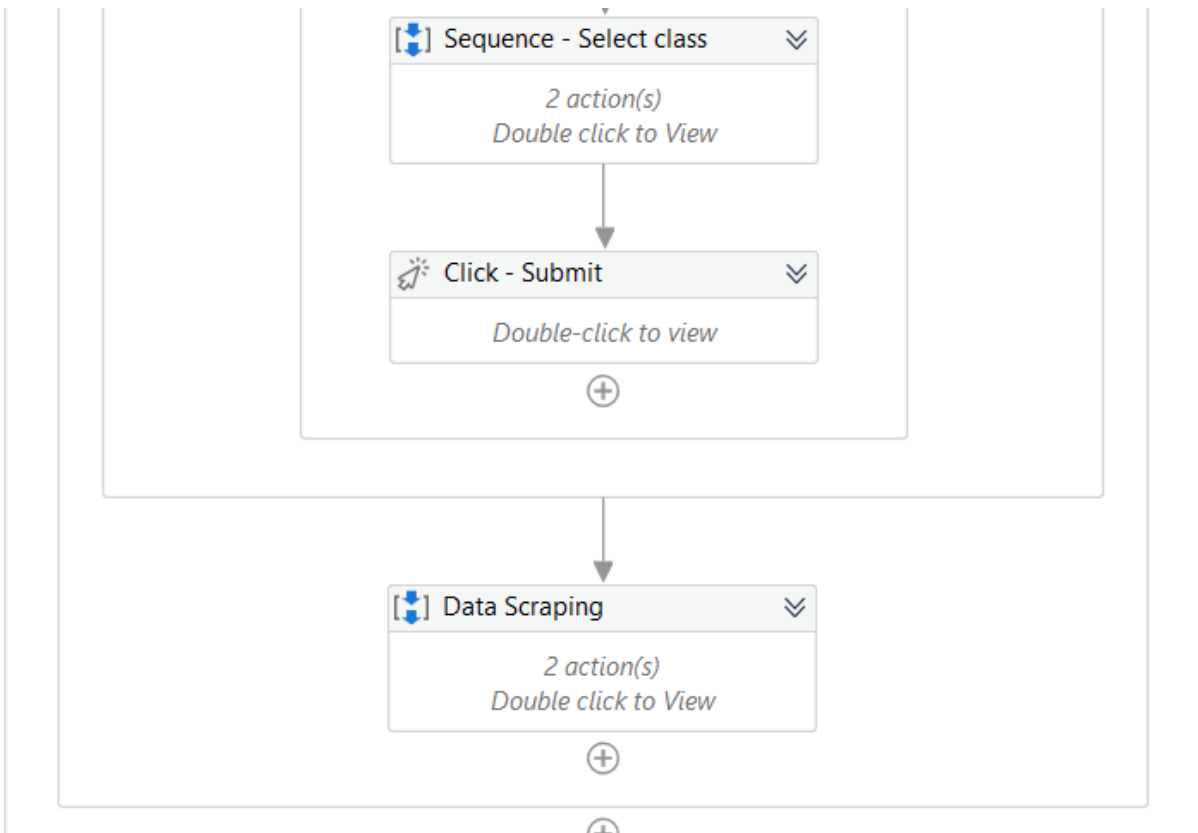
The partial implementation of the project has provided us with the data of the prices for the flights and trains for the destination provided. We have been successfully able to extract the data of the trains/flights available for the given Source, Destination and the Travel Date and stored in an Excel Sheet which we'll be using later to analyze the best mode of Travel.







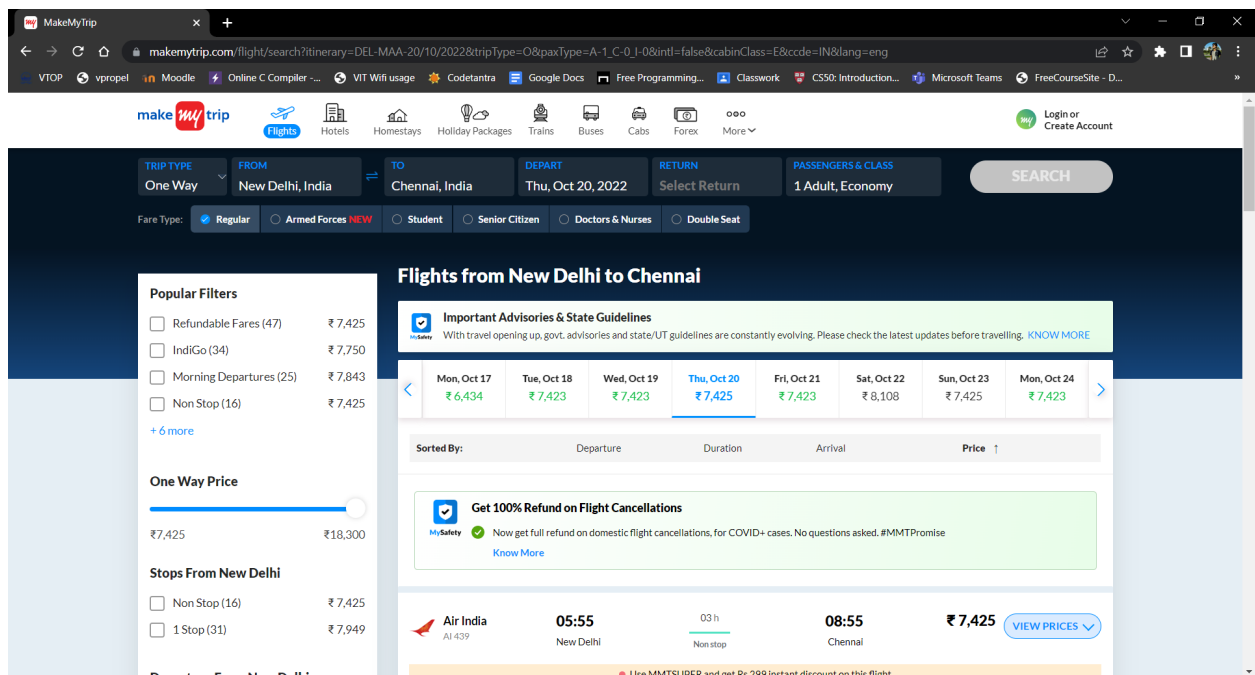
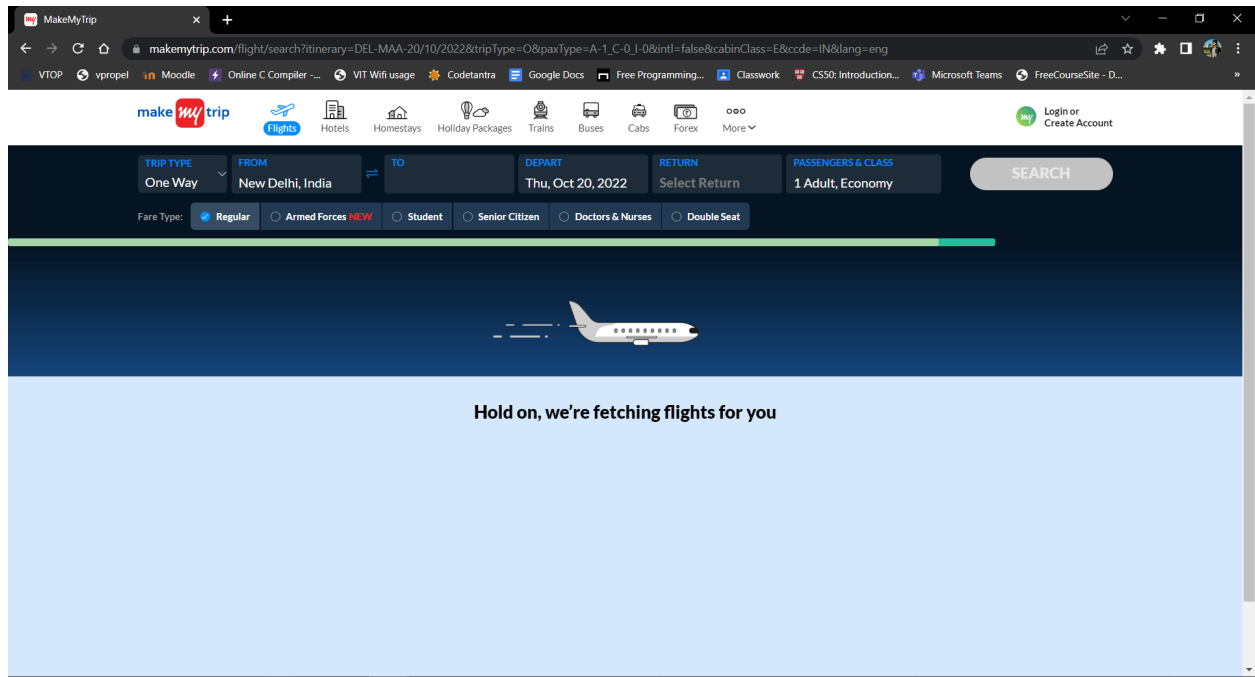




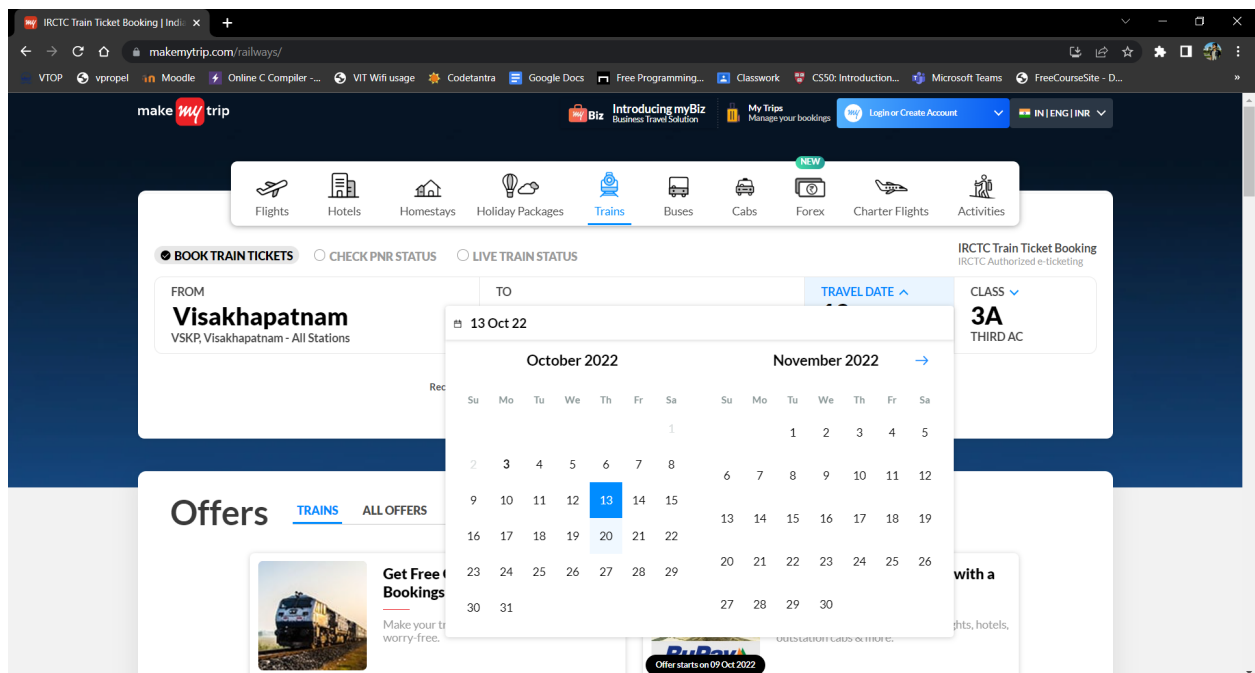
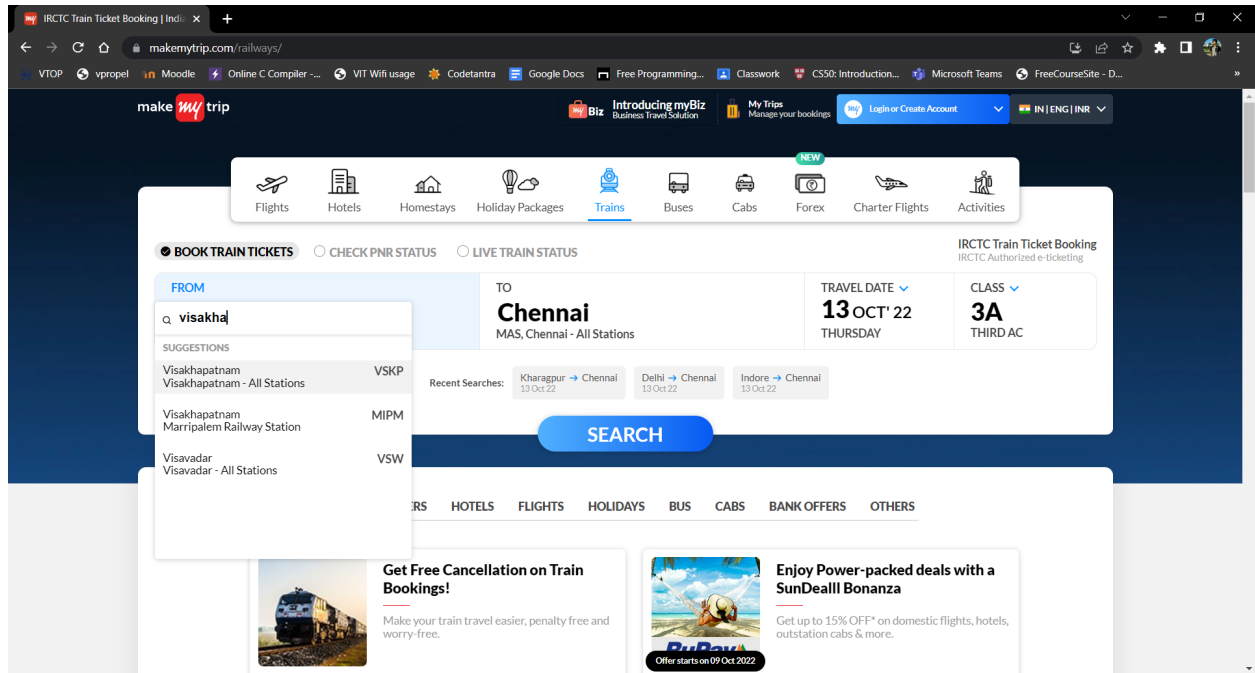
## Webpage Screenshots

### Flight Booking

The screenshot shows the makemytrip.com website interface. The main search area is for flights from New Delhi (DEL) to Chennai (MAA). The page includes a navigation bar with links to Flights, Hotels, Homestays, Holiday Packages, Trains, Buses, Cabs, Forex, Charter Flights, and Activities. The search results show a calendar view for October and November 2022, with prices listed for various dates. The page also features a 'REGISTER NOW & get: 20% Deposit Bonus with Global ID N' banner at the bottom.



# Train Booking



MakeMyTrip - Trains

makemytrip.com/railways/listing/?classCode=3A&className=3%20Tier%20AC&date=20221020&destCity=Chennai&destStn=MAS&srcCity=Visakhapatnam&srcStn=VSKP

VTOP vpropeel Moodle Online C Compiler Codetantra Google Docs Free Programming... Classwork CS50: Introduction... Microsoft Teams FreeCourseSite - D...

make my trip Flights Hotels Homestays Holiday Packages Trains Buses Cabs Forex Charters Activities & Tours Login or Create Account

FROM CITY VSKP, Visakhap... TO CITY MAS, Chennai TRAVEL DATE Thu, 20 Oct 22 CLASS 3A, 3 Tier AC SEARCH

Sorted By: Availability (Default) Showing 7 out of 7 trains.

Quick Filters

- ☐ AC
- ☐ Available
- ☐ Departure after 6 PM
- ☐ Arrival before 12 PM

Ticket Types

- ☐ Free Cancellation (7)
- ☐ Trip Guarantee (2)

Journey Class Filters

- ☐ 1st Class AC - 1A (3)
- ☐ 2nd Class AC - 2A (16)

20 Oct, Thu 21 Oct, Fri 22 Oct, Sat 23 Oct, Sun 24 Oct, Mon 25 Oct, Tue 26 Oct, Wed 27 Oct, Thu 28 Oct, Fri 2

LIMITED OFFER

Introducing Trip Guarantee  
Get 3X refund if your waitlisted ticket doesn't get confirmed. Use this amount to upgrade your ticket to:  
Flights + Buses + Cabs + Trains  
KNOW MORE

**COROMANDAL EXP**  
#12841 | Departs on: S M T W T F S  
4:45 AM, Thu Vishakhapatnam (VSKP) 12 hrs 5 mins 4:50 PM, Thu Chennai Central (MAS) View route

Class	Availability	Fare	Features
3A	AVAILABLE 28	₹ 1155	Free Cancellation Updated 4 days ago
SL	AVAILABLE 1	₹ 440	Free Cancellation Updated 4 days ago
2A	RLWL 8	₹ 1635	Free Cancellation Updated 4 days ago
1A	RLWL 2	₹ 2740	Free Cancellation Updated 4 days ago

## Extracted Data Screenshots

### Flights

data - Excel

Kailash Pulipati

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard Font Alignment Number Styles Cells Editing

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Flight Nam	Departure	Journey Ti	Arrival Tim	Ticket Fare																		
2	Air India	05:55	03 h	08:55	₹ 7,425																		
3	Air India	16:15	03 h 15 m	19:30	₹ 7,425																		
4	IndiGo	15:40	02 h 55 m	18:35	₹ 7,750																		
5	IndiGo	23:00	02 h 55 m	01:55	₹ 7,750																		
6	IndiGo	01:50	05 h 10 m	07:00	₹ 7,949																		
7	IndiGo	02:25	06 h 40 m	09:05	₹ 7,949																		
8	IndiGo	03:50	07 h	10:50	₹ 7,949																		
9	IndiGo	06:55	05 h 15 m	12:10	₹ 7,949																		
10	IndiGo	06:00	06 h 10 m	12:10	₹ 7,949																		
11	IndiGo	09:55	05 h 15 m	15:10	₹ 7,949																		
12	IndiGo	09:15	06 h 40 m	15:55	₹ 7,949																		
13	IndiGo	13:00	05 h 30 m	18:30	₹ 7,949																		
14	IndiGo	15:00	07 h 05 m	22:05	₹ 7,949																		
15	Vistara	07:00	02 h 50 m	09:50	₹ 7,950																		
16	Air India	09:45	02 h 55 m	12:40	₹ 7,950																		
17																							
18																							
19																							
20																							
21																							
22																							
23																							
24																							
25																							
26																							
27																							
28																							
29																							

Sheet1

Ready 14,000 characters Count to 100%



## Trains

data\_Trains - Excel

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard: Cut, Copy, Paste, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, Percentage, Decimals, Thousands Separator

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	COROMANDAL EXP	#12841	4:45 AM, Thu	4:50 PM, Thu	12 hrs 5 mins	1155	AVAILABLE 58													
2	DHN ALAPPUZHA E	#13351	8:35 AM, Thu	11:15 PM, Thu	14 hrs 40 mins	1110	RLWL 15													
3	CHENNAI MAIL	#12839	2:10 PM, Thu	3:15 AM, Fri	13 hrs 5 mins	1155	RLWL 4													
4	JSME TBM EXP	#12376	8:55 AM, Thu	10:25 PM, Thu	13 hrs 30 mins	1180	PQWL 33													
5	BBS MAS S F	#12830	7:10 PM, Thu	7:50 AM, Fri	12 hrs 40 mins	1155	RLWL 8													
6	DBRG SMVB SPL	#02986	2:05 AM, Thu	1:55 PM, Thu	11 hrs 50 mins	1475	RLWL 6													
7	SCL CBE EXPRESS	#12516	3:10 PM, Thu	3:15 AM, Fri	12 hrs 5 mins	1155	RLWL 11													
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				

Sheet1

Ready Accessibility: Good to go