

## Individual Coursework

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<b>Module Leader</b>	: Ms.Tharushi Amarasinghe
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**Centre:** Colombo

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The department is not responsible if an assignment is lost. To cover this eventuality, you are advised to take a copy of the assignment OR to ensure you have the means of re-creating it.

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### Exceptional Factors Affecting Your Performance:

Students should submit a Mitigating Circumstances Form with evidence, if they miss the submission deadline. This form must be submitted within five working days of the submission date. The Mitigating Circumstances Form is available on the LMS, in the General Information and Policies section.

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## Assumptions

(This is in addition to the assumptions given by the lecturer on ICW specification)

- The Python program was made using Python IDLE version 3.13.5. It is assumed that whoever will use the program will do so with that version or one that is close as otherwise it may not execute as intended. When it was tested on IDLE 3.13.5 it performed well (take a look at screenshots if confirmation is needed, it is separated amongst the figures for ease of viewing).
- It is assumed that the correct username and password  
`correct_username2025 = "sanithu"`  
`correct_password2025 = "20250212"`  
[Please enter this Username and Password for the program to work correctly]
- When recreating figure 3 it is presumed that the user enters their flight number correctly (same as with the rest of the data for that menu).
- It is assumed in the “Search for Available Flights” menu (figure 5) that the user enters the correct destination that they are searching for the availability of flights for.
- It is assumed the user enters a valid option in the choice between Business/Economy (if function choice in figure 5). Here it is necessary that the spelling is correct.
- It is assumed the user will will a given departing time (6:30 am/2:00 pm/8:30 pm) and the proper destination (ORL/MIA/LAX) for figure 5.

## Other Relevant Details

- I used dictionaries to make it more convenient since I was getting too many errors when I tried to do without them. I also used lists as well to organize data.
- `correct_username2025 = "sanithu"`  
`correct_password2025 = "20250212"`  
`[Please enter this Username and Password for the program to work correctly]`
- I didn't copy and paste any code as it was directly, but I did research on how to input dictionaries (as well as the def tag) on Youtube and found tutorials/guides from Youtube channels such as Codecamp and Brocode .  
(Code, 2022)
- The screenshots (of Test cases of Figures, in addition to the ones at the end of this report) are included in a separate folder in the larger folder which this report is stored in.
- I looked up how to add the following elements from YouTube channels or google and troubleshooted them (in addition to dictionaries)
- ❖ Import random - (for the flight ID generation for figure 5)  
random is a standard python library module so it should function regularly on any IDLE version.  
(Schafer, 2017)
- ❖ `.lower()` – ( to turn inputs to lowercase so that less errors happen when checking for if condition)  
(Courses, 2023).
- ❖ `\n` - (to move topics to the next line when printing text where I felt it was necessary)  
(Electriangle, 2022)
- ❖ `strip()` - (to remove leading and trailing whitespace)  
(Shrivastava, 2021)
- ❖ `.exit()` – (to exit program)  
(Jakubication, 2023)
- ❖ Format specifiers – (to align text specially in figure 4)  
(Brocode, 2022)

- ❖ `import sys` – (to close the program in the middle of the program in this program)  
`sys.exit()`  
(Jakubication, 2023)
- ❖ `.replace(" ", "")` – (removes all spaces from a string, so that even if the user makes a mistake with the spacing it is negligible)  
(Python Software Foundation, 2025)
- ❖ Upon recognizing that I need to do some overhauling in some areas I decided to change certain areas so they work better with what is requested. Due to this there might be some changes in how certain test cases and the last program looks like since these overhauls happened around the 22<sup>nd</sup> of June and the rest of most of the work was done earlier.

## ❖ Algorithm for the Python Program

1. Start

2. Initializing Variables

```
Username = ""
```

```
Password = ""
```

```
q1 = ""
```

```
Business = 3
```

```
Economy = 5
```

```
#Intializing the lists used in the python code
```

```
flights= []
```

```
customers= []
```

```
availables= []
```

```
bookings= []
```

```
view_booking = []
```

```
stafflogintitle1="CloudFare Airlines"
```

```
stafflogintitle2="Staff Login"
```

```
Mainmenutitle1="CloudFare Airlines"
```

```
Mainmenutitle2="Main Menu"
```

```
correct_username2025 = "sanithu"
```

```
correct_password2025 = "20250212"
```

```
line = "-"*80
```

3. 3.1 Display stafflogintitle1

3.2 Display stafflogintitle2

3.3 Enter "Username -"

3.4 Enter "Password -"

4.

4.1 If Username = correct\_username2025 and Password = correct\_password2025:

Then

4.2 Enter "Do you want to login (Yes/No)? "

if Yes then login into system

else go to 28.

5. While the user is logged in

#Main Menu

5.1 Display Mainmenutitle1.center(80)

5.2 Display Mainmenutitle2.center(80)

6.

Display "(1) Add flight details"

"(2) Register a customer"

"(3) Search for available flight details"

"(4) Booking a flight"

"(5) View booking details"

"(6) Exit"

# line = "-"\*80, (line) is used to separate the sections but I haven't entered it after every section on this Algorithm also I make use of the define tag in the python code to better manage the sections

7. Enter "Your choice"

8. if choice 1 then go to "(1) Add flight details" menu

Display "CloudFare Airlines."

"Add Flight Details.center"

# Each of the menu topics were centered in the Python code

# The presumption is made that the user enters the flight number correctly

8.1 Enter "1) Flight No-"

8.2 If the flight No starts with JFK then has 3 digits continue

Else Display "Invalid Input"

8.3 Display "(2) Departure (From) – JFK"

8.4 Enter "(3) Arrival (To) – "

If Orlando/Miami/Los Angeles is given continue

Else Display "Invalid Input"

"4) Departure Date - "

"5) Departure Time - "

"6) Total no of economy class seats - 5"

"7) Total no of business class seats-3"

"8) Fare for an economy class person -500"

"9) Fare for a business class person -1000"

9. Enter "Do you want to add (Yes/No)?"

if Yes then Display "Flight added successfully."

else "Flight not added"

10. elif choice 2 then go to "(2) Register a customer" menu

10.1 Display "Register Customer"

10.2 Enter "1) Customer ID-"

10.3 If Customer ID starts with C and then is followed by 3 digits continue

Else Display "Invalid Input"

"2) Name-"

"3) Passport Number-"

"4) Address-"

"5) Telephone Number-"

11. Enter "Do you want to save (Yes/No)?"

if Yes then Display "Customer registered."

else "Customer not registered."

12. elif choice 3 then go to "(3) Search for available flight details" menu

12.1 Generate flight ID

12.2 Display "CloudFare Airlines"

"Search for Available Flights"

13. Enter "Do you want to search (Yes/No)? "

if Yes Display "Flight searched and added."

else Display "Flight not searched."

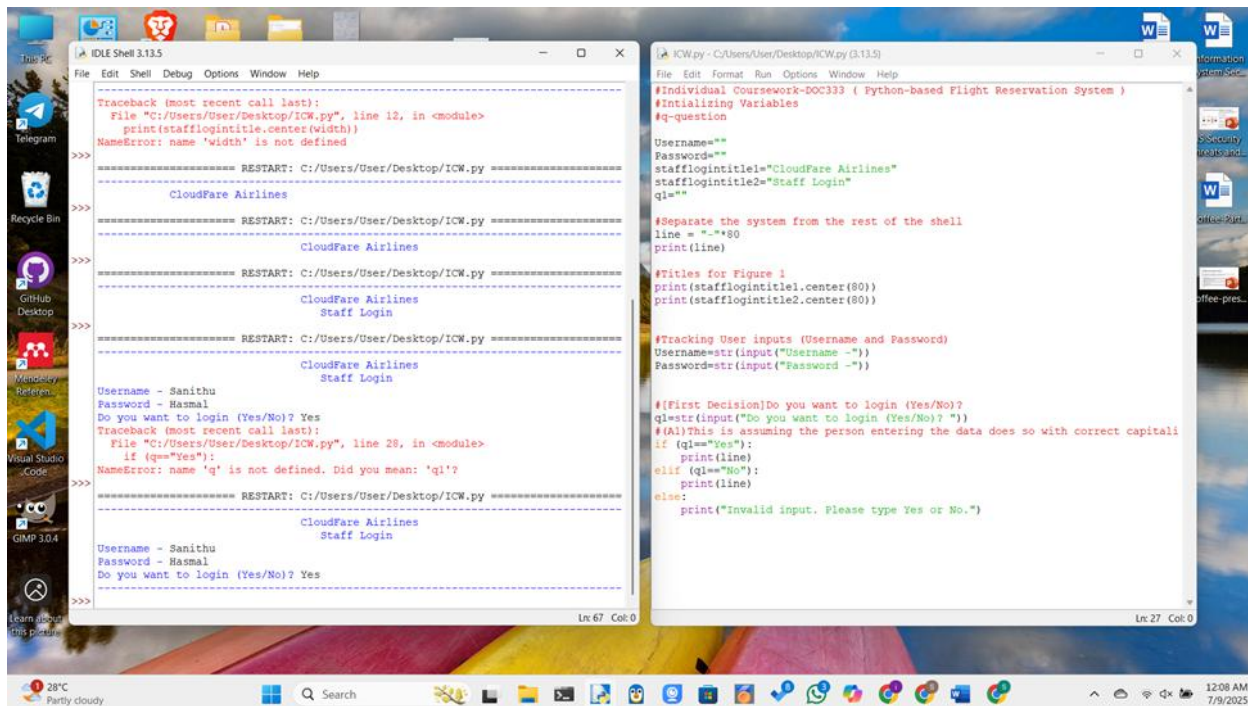


14. 14.1 Enter "1) Departure Date - "  
      "2) Departure Time - "  
      #The user must input (6:30 am/2:00 pm/8:30 pm)
- 14.2 Enter "Flying To (Orlando/Miami/Los Angeles) -"  
      #The user must input (ORL/MIA/LAX)  
      Display flight ID using Departure Time
- 14.3 Enter "Travel Class (Business/Economy)-"  
      #Assume the user inputs one of the two
15. if Business then calculate remaining seats  
      elif Economy calculate remaining seats  
      else Display "Invalid option. Please select Business or Economy"
- "No of seats available in the flight – {available seats}"  
      #calculated using the if function beforehand
16. elif choice 4 then go to "(4) Booking a flight" menu
17. Display "CloudFare Airlines"  
      "Booking a flight"
18. 18.1 Enter "1) Flight No -"  
      "2) Customer Name -"  
      "3) Passport Number -"  
      "4) Destination Airport -"  
      # Must be one of three (Orlando/Miami/Los Angeles)  
      "5) Departure date -"
- 18.2 Display "6) Departure time-"  
      # Auto Calculated depending on the destination airport
19. Enter "Do you want to book(Yes/No)?"
20. if yes then Display "Flight booked."  
      Else Display "Flight not booked."
21. Elif choice 5 then go to "(5) View booking details" menu

22. Display “CloudFare Airlines”  
    “View booking details”
23. Enter “Enter Departure Date:” (Enter the same date as in the Booking a flight menu)  
    # The appropriate distancing is included in the Python code.
24. Display “ “Departure Date”, “:.” ”
25. Enter “Do you want to view the bookings?”
26. if Yes then Display ("Flight No", "Departure Time", "Destination", "No of passengers")  
    # Used the correct formatting in the Python file  
    # Data from Figure 6 is ported into this  
    Display “Booking details viewed”  
    else Display “Returning to main menu”
27. else choice 6 then exit the program
28. Display “Login cancelled.”
29. End

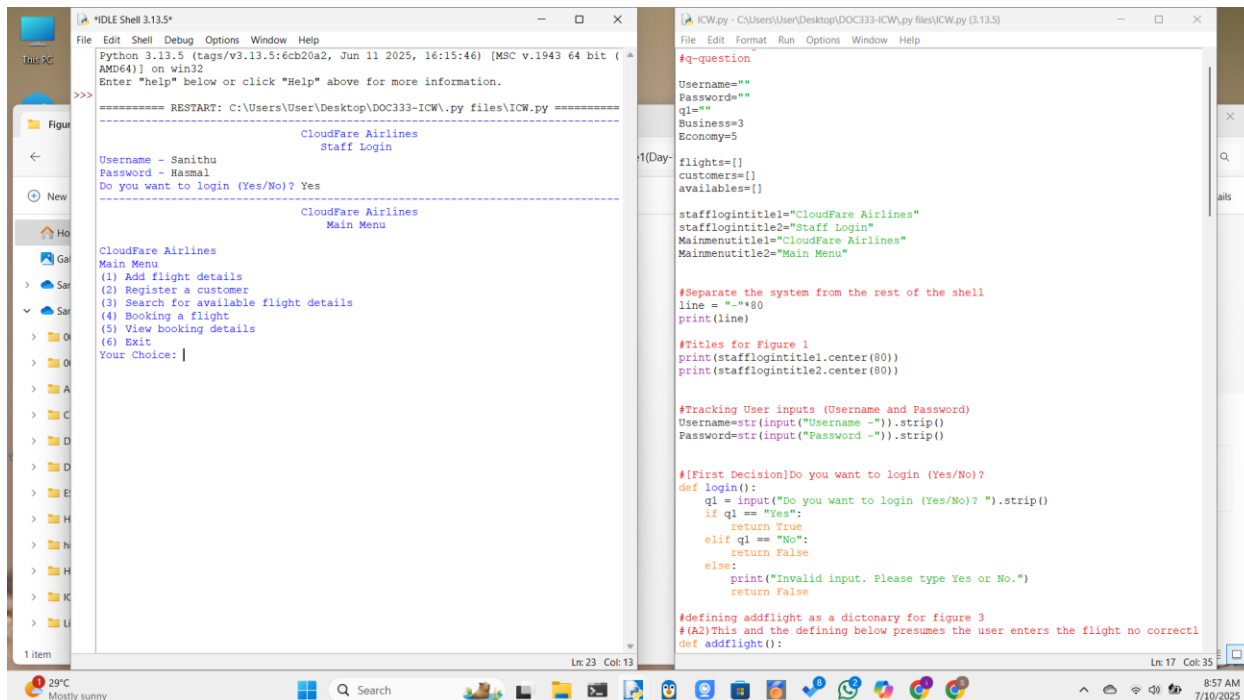
## Test Cases

- The following pages contain the test cases for the figures.  
(from the next page onwards)
- Certain screenshots were taken at different points in the progression of the Python program. Please check the date at the corner of the screenshots to ascertain the dates. Certain mistakes like not centering some Menus were fixed later on.
- Certain Figures (5,6,7) went through some changes towards the later stages of the program so that the program could auto generate certain aspects for the user due to this they may appear a bit different to their respective test cases.



The screenshot shows a Windows desktop with two code editors. The left editor, titled 'IDLE Shell 3.13.5', displays a Python script with a traceback error: 'NameError: name 'width' is not defined'. The script is titled 'CloudFare Airlines' and includes a 'Staff Login' section. The right editor, titled 'ICW.py - C:/Users/User/Desktop/ICW.py (3.13.5)', shows the same script with a corrected variable name 'q1' instead of 'width'. The script includes comments for 'Individual Coursework-DOC333 ( Python-based Flight Reservation System )' and 'Initializing Variables'. The script prompts for 'Username' and 'Password', and asks 'Do you want to login (Yes/No)?'. It also includes a decision block for 'q1' (Yes/No) and a message for 'Invalid input. Please type Yes or No.'.

Figure	Input	Expected Output	Actual Output	Result
1	3 (Username,Password,Yes/No)	When answering Yes (or No) to the question “Do you want to login?”, successfully run the program and display the staff login interface menu	By mistake I had entered q1 as q and as a result the program didn’t properly and resulted in error.	I corrected the mistake by changing the variable name from q to q1 and then the program ran smoothly.



The screenshot displays a Python IDE with two windows. The left window, titled 'IDLE Shell 3.13.5\*', shows the program's execution. It starts with a restart command, followed by a menu for 'CloudFare Airlines' with options: (1) Add flight details, (2) Register a customer, (3) Search for available flight details, (4) Booking a flight, (5) View booking details, and (6) Exit. The user has chosen option 3. The right window, titled 'ICW.py - C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py (3.13.5)', shows the source code. The code includes a header for 'CloudFare Airlines', a menu, and a function to handle flight details. The code uses a dictionary to store flight details and a loop to display them. The code also includes a function to handle the login process, which is currently commented out.

```

===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====
CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: |

#q-question
Username=""
Password=""
q1=""
Business=3
Economy=5

flights=[]
customers=[]
availables=[]

stafflogintitle1="CloudFare Airlines"
stafflogintitle2="Staff Login"
Mainmenutitle1="CloudFare Airlines"
Mainmenutitle2="Main Menu"

#Separate the system from the rest of the shell
line = "-"*80
print(line)

#Titles for Figure 1
print(stafflogintitle1.center(80))
print(stafflogintitle2.center(80))

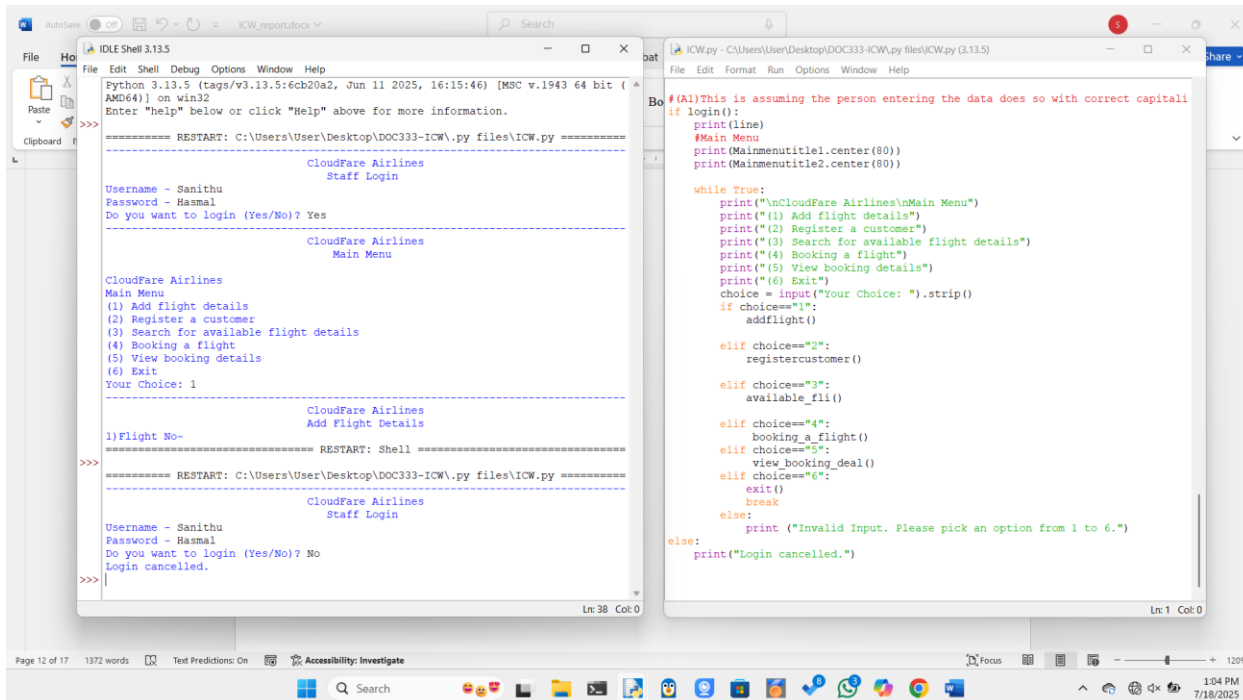
#Tracking User inputs (Username and Password)
Username=str(input("Username -")).strip()
Password=str(input("Password -")).strip()

#[First Decision]Do you want to login (Yes/No)?
def login():
    q1 = input("Do you want to login (Yes/No)? ").strip()
    if q1 == "Yes":
        return True
    elif q1 == "No":
        return False
    else:
        print("Invalid input. Please type Yes or No.")
        return False

#defining addflight as a dictionary for figure 3
#(A2)This and the defining below presumes the user enters the flight no correct
def addflight():

```

Figure	Input	Expected Output	Actual Output	Result
1	3 (Username,Password,Yes/No)	Display the line of separation then Display main menu	Display the line of separation then Display main menu	Pass



```

Python 3.13.5 (tags/v3.13.5:6cb20a2, Jun 11 2025, 16:15:46) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>>
===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====
                                     CloudFare Airlines
                                     Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

                                     CloudFare Airlines
                                     Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 1

                                     CloudFare Airlines
                                     Add Flight Details

1)Flight No-=====
>>>
===== RESTART: Shell =====
                                     CloudFare Airlines
                                     Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? No
Login cancelled.
>>>
    
```

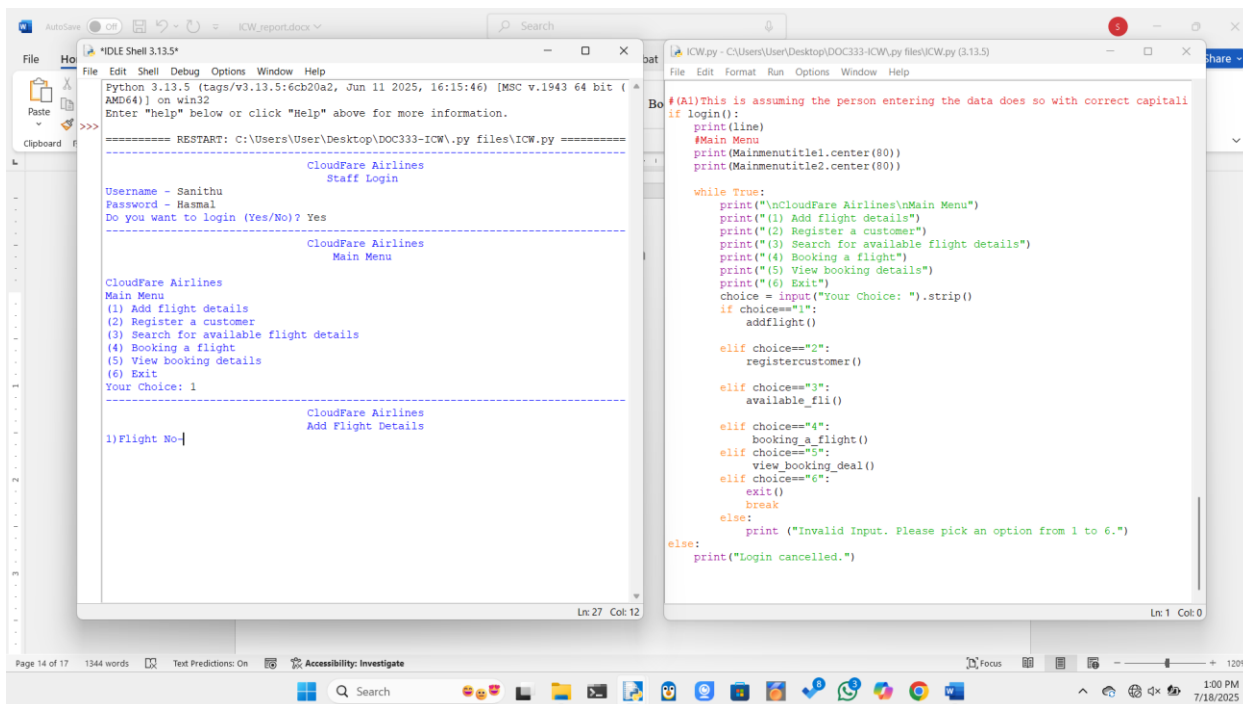
```

ICW.py - C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py (3.13.5)
File Edit Format Run Options Window Help

#(A1)This is assuming the person entering the data does so with correct capitali
if login():
    print(line)
#Main Menu
print(Mainmenutitle1.center(80))
print(Mainmenutitle2.center(80))

while True:
    print("\nCloudFare Airlines\nMain Menu")
    print("(1) Add flight details")
    print("(2) Register a customer")
    print("(3) Search for available flight details")
    print("(4) Booking a flight")
    print("(5) View booking details")
    print("(6) Exit")
    choice = input("Your Choice: ").strip()
    if choice=="1":
        addflight()
    elif choice=="2":
        registercustomer()
    elif choice=="3":
        available_fli()
    elif choice=="4":
        booking_a_flight()
    elif choice=="5":
        view_booking_deal()
    elif choice=="6":
        exit()
    else:
        break
    else:
        print ("Invalid Input. Please pick an option from 1 to 6.")
else:
    print("Login cancelled.")
    
```

Figure	Input	Expected Output	Actual Output	Result
1	3 (Username,Password,Yes/No)	Display Login cancelled	Display Login cancelled	Pass



```

Python 3.13.5 (tags/v3.13.5:6cb20a2, Jun 11 2025, 16:15:46) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 1

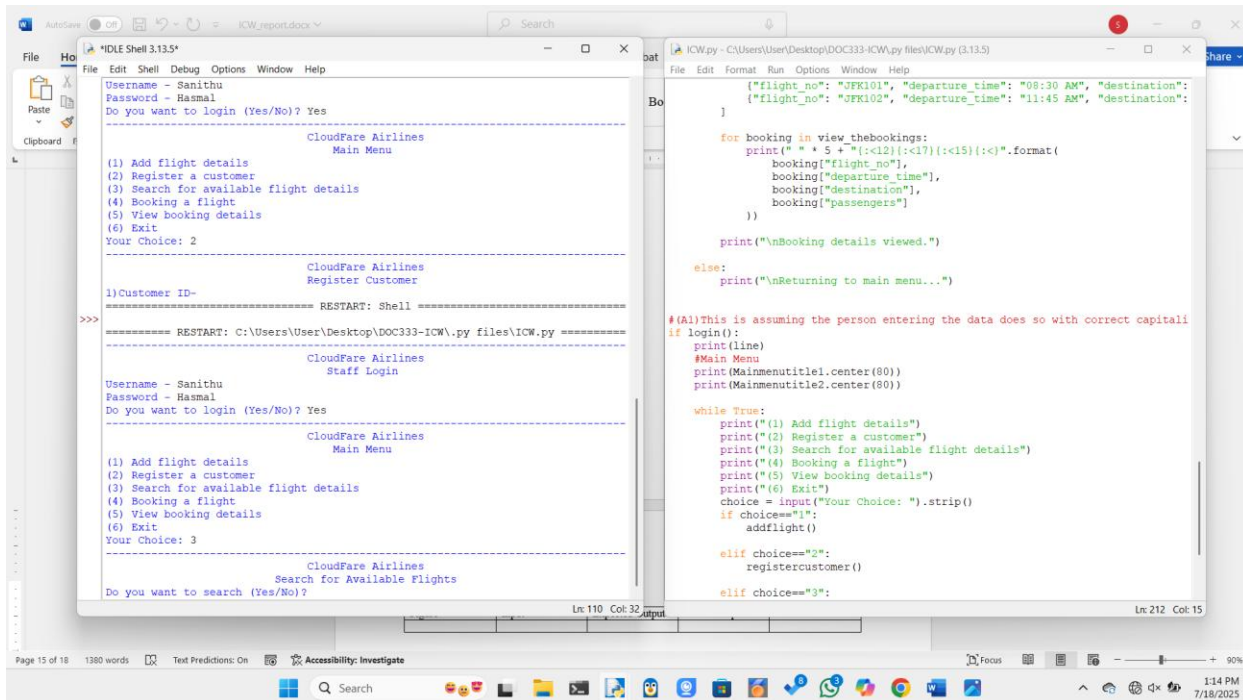
CloudFare Airlines
Add Flight Details

1)Flight No-|

#(All)This is assuming the person entering the data does so with correct capitali
if login():
    print(line)
    #Main Menu
    print(Mainmenutitle1.center(80))
    print(Mainmenutitle2.center(80))

    while True:
        print("\nCloudFare Airlines\nMain Menu")
        print("(1) Add flight details")
        print("(2) Register a customer")
        print("(3) Search for available flight details")
        print("(4) Booking a flight")
        print("(5) View booking details")
        print("(6) Exit")
        choice = input("Your Choice: ").strip()
        if choice=="1":
            addflight()
        elif choice=="2":
            registercustomer()
        elif choice=="3":
            available_fli()
        elif choice=="4":
            booking_a_flight()
        elif choice=="5":
            view_booking_deal()
        elif choice=="6":
            exit()
            break
        else:
            print ("Invalid Input. Please pick an option from 1 to 6.")
    else:
        print("Login cancelled.")
    
```

Figure	Input	Expected Output	Actual Output	Result
2	1 (Your choice – 1)	Display Add Flight Details menu	Display Add Flight Details menu	Pass



The screenshot displays a Python IDE with two panes. The left pane shows the output of a flight booking system. The right pane shows the source code of the program.

**Output (Left Pane):**

```

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 2

CloudFare Airlines
Register Customer

1)Customer ID-
===== RESTART: Shell =====
===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 3

CloudFare Airlines
Search for Available Flights
Do you want to search (Yes/No)?

```

**Source Code (Right Pane):**

```

flight_no": "JFK101", "departure_time": "08:30 AM", "destination":
flight_no": "JFK102", "departure_time": "11:45 AM", "destination":

for booking in view thebookings:
    print(" * 5 + "({:12}{:17}{:15}{:})".format(
        booking["flight_no"],
        booking["departure_time"],
        booking["destination"],
        booking["passengers"]
    ))

print("\nBooking details viewed.")
else:
    print("\nReturning to main menu...")

#(A1)This is assuming the person entering the data does so with correct capitali
if login():
    print(line)
    #Main Menu
    print(Mainmenutitle1.center(80))
    print(Mainmenutitle2.center(80))

while True:
    print("(1) Add flight details")
    print("(2) Register a customer")
    print("(3) Search for available flight details")
    print("(4) Booking a flight")
    print("(5) View booking details")
    print("(6) Exit")
    choice = input("Your Choice: ").strip()
    if choice=="1":
        addflight()
    elif choice=="2":
        registercustomer()
    elif choice=="3":

```

Figure	Input	Expected Output	Actual Output	Result
2	1 (Your choice – 3)	Display Search for Available Flights Menu	Display Search for Available Flights Menu	Pass



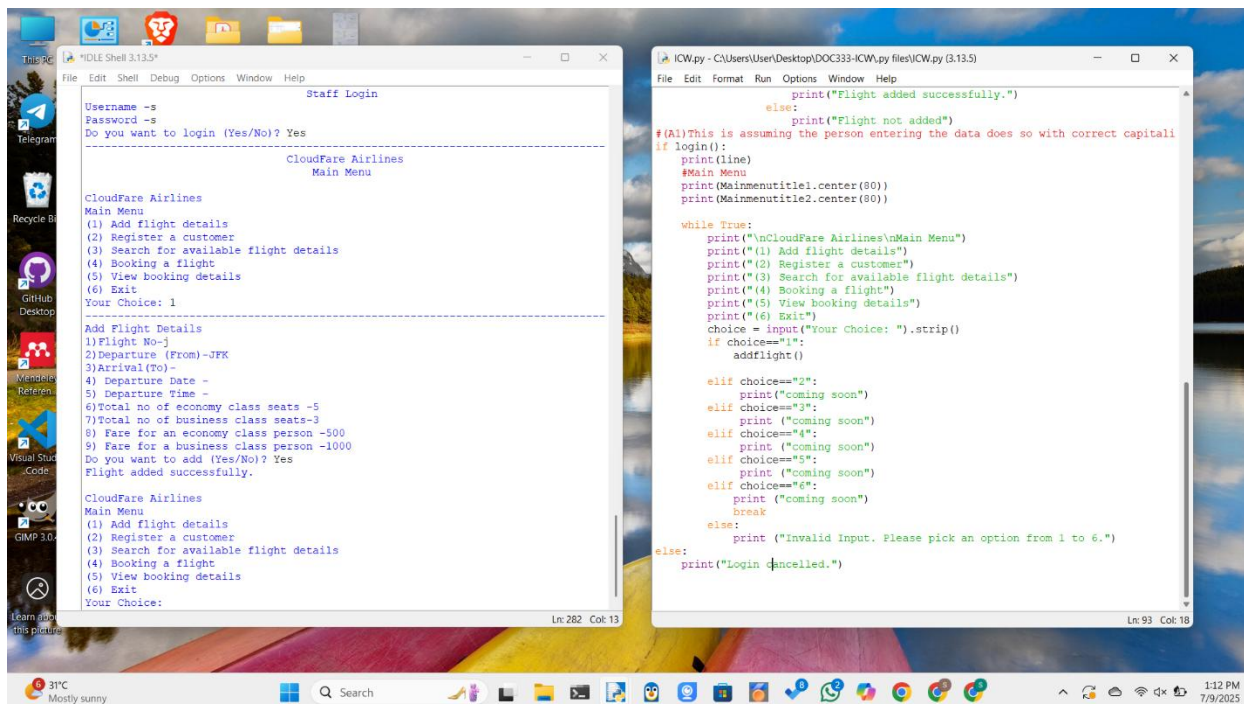
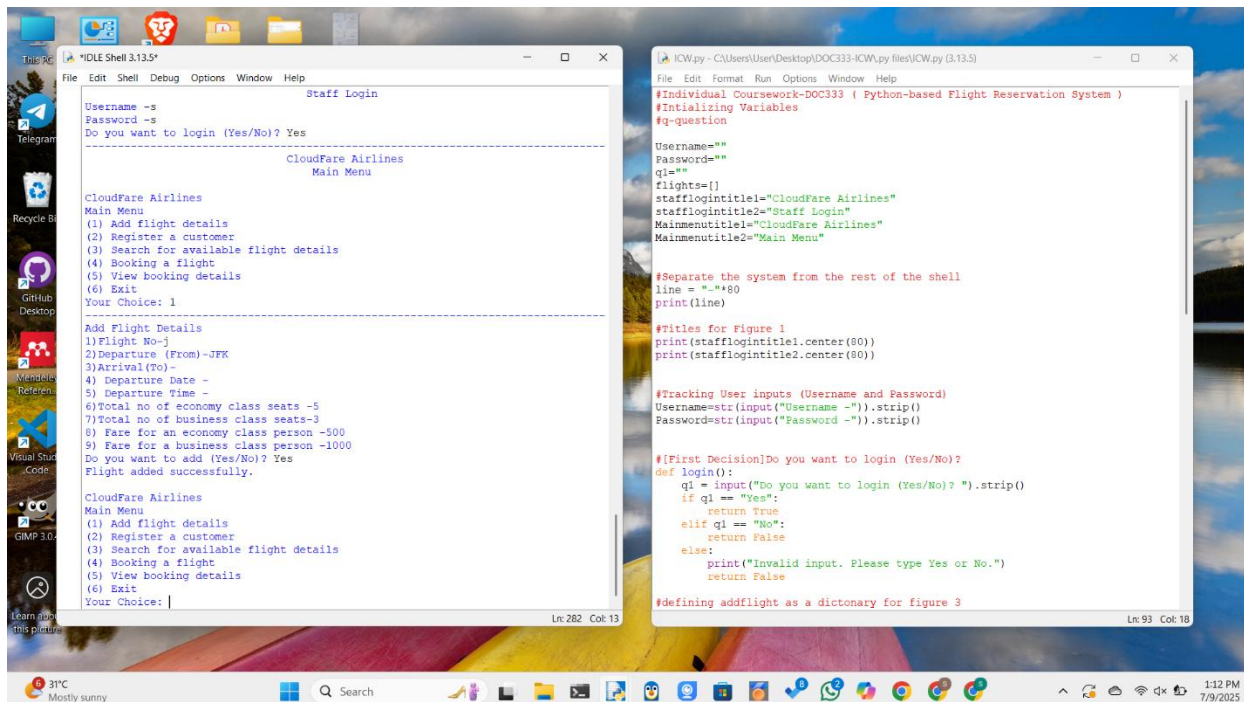


Figure	Input	Expected Output	Actual Output	Result
2	1 (Your choice – 2)	Display Register Customer Menu	Display Register Customer Menu	Pass



```

#Individual Coursework-DOC333 ( Python-based Flight Reservation System )
#Initializing Variables
#q-question

Username=""
Password=""
ql=""
flights=[]
stafflogintitle1="CloudFare Airlines"
stafflogintitle2="Staff Login"
Mainmenutitle1="CloudFare Airlines"
Mainmenutitle2="Main Menu"

#Separate the system from the rest of the shell
line = "-"*80
print(line)

#Titles for Figure 1
print(stafflogintitle1.center(80))
print(stafflogintitle2.center(80))

#Tracking User inputs (Username and Password)
Username=str(input("Username -")).strip()
Password=str(input("Password -")).strip()

#[First Decision]Do you want to login (Yes/No)?
def login():
    ql = input("Do you want to login (Yes/No)? ").strip()
    if ql == "Yes":
        return True
    elif ql == "No":
        return False
    else:
        print("Invalid input. Please type Yes or No.")
        return False

#defining addflight as a dictionary for figure 3

```

Figure	Input	Expected Output	Actual Output	Result
3	5 (Flight No,Arrival (to),Departure Date,Departure Time,Yes/No)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Pass

```

#CMD Shell 3.13.5*
Staff Login
Username -s
Password -s
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 1

Add Flight Details
1) Flight No-j
2) Departure (From)-JFK
3) Arrival(TO)-
4) Departure Date -
5) Departure Time -
6) Total no of economy class seats -5
7) Total no of business class seats-3
8) Fare for an economy class person -500
9) Fare for a business class person -1000
Do you want to add (Yes/No)? Yes
Flight added successfully.

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice:

Ln: 282 Col: 13

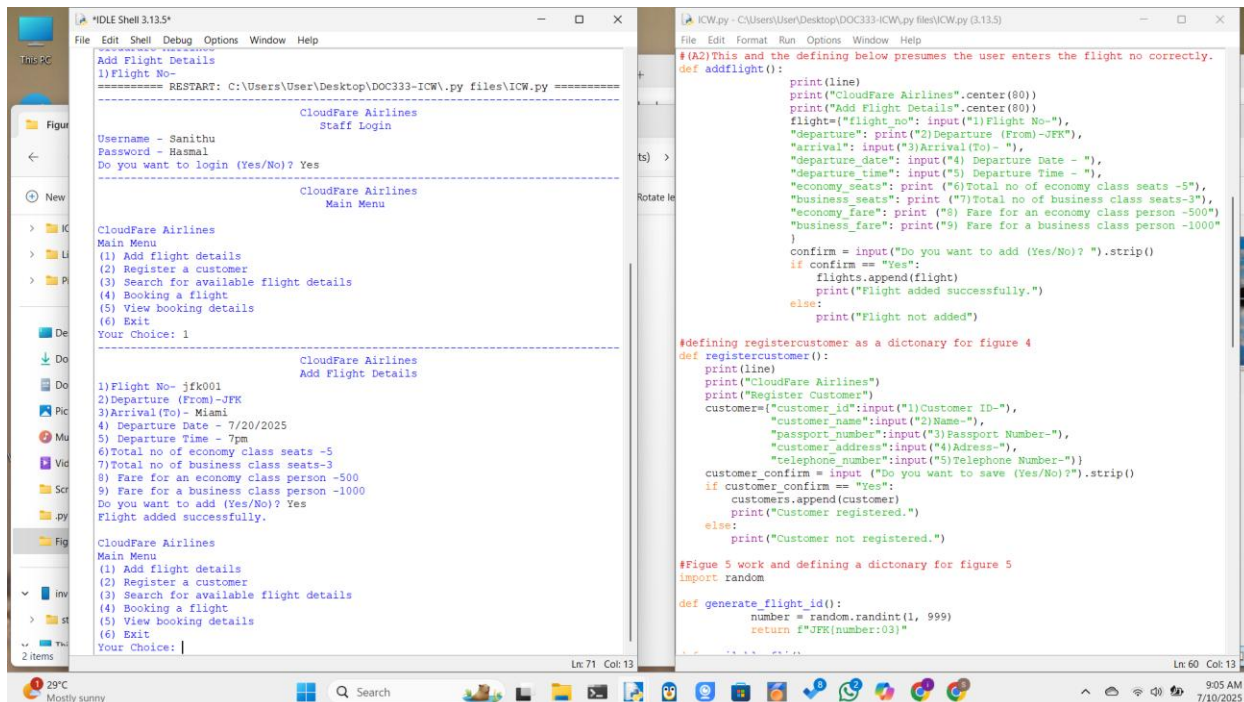
ICW.py - C:\Users\User\Desktop\DOC333-ICW.py files\ICW.py (3.13.5)
File Edit Format Run Options Window Help
print("Flight added successfully.")
else:
    print("Flight not added")
#(A1) This is assuming the person entering the data does so with correct capitali
if login():
    print(line)
#Main Menu
print(Mainmenutitle1.center(80))
print(Mainmenutitle2.center(80))

while True:
    print("\nCloudFare Airlines\nMain Menu")
    print("(1) Add flight details")
    print("(2) Register a customer")
    print("(3) Search for available flight details")
    print("(4) Booking a flight")
    print("(5) View booking details")
    print("(6) Exit")
    choice = input("Your Choice: ").strip()
    if choice=="1":
        addflight()

    elif choice=="2":
        print("coming soon")
    elif choice=="3":
        print("coming soon")
    elif choice=="4":
        print("coming soon")
    elif choice=="5":
        print("coming soon")
    elif choice=="6":
        print("coming soon")
        break
    else:
        print("Invalid Input. Please pick an option from 1 to 6.")
else:
    print("Login cancelled.")

Ln: 93 Col: 18
    
```

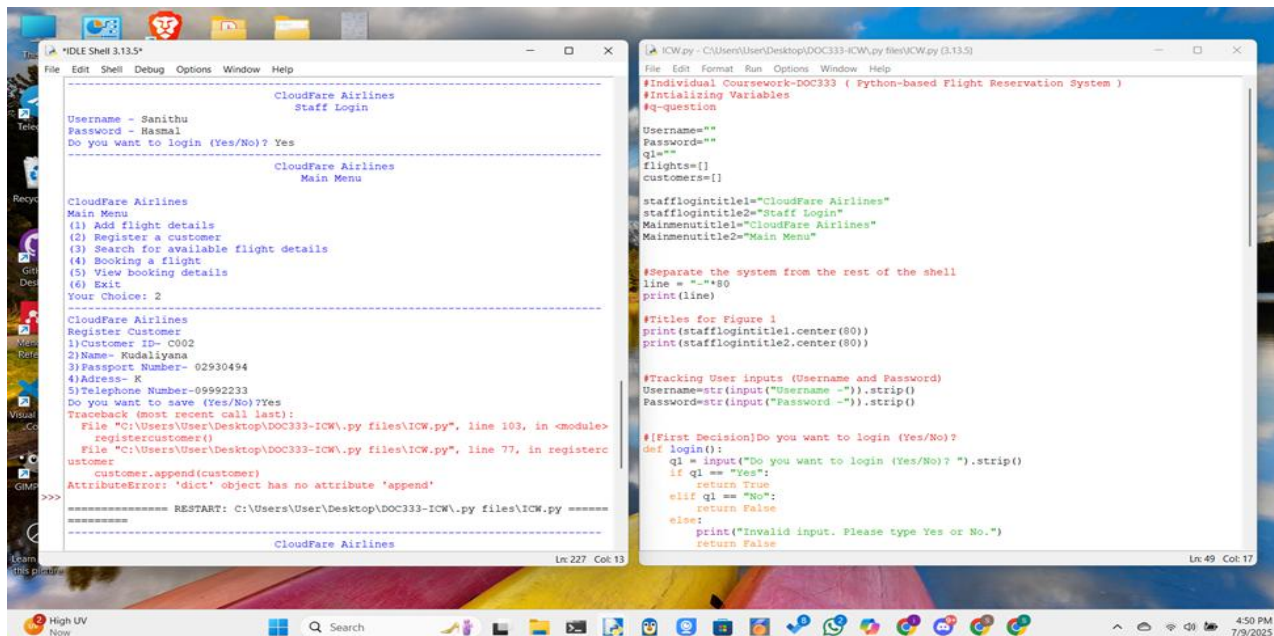
Figure	Input	Expected Output	Actual Output	Result
3	5 (Flight No,Arrival (to),Departure Date,Departure Time,Yes/No)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Pass



The screenshot shows a Windows desktop with two windows open. The left window is an IDLE Shell titled "IDLE Shell 3.13.5\*", displaying the output of a Python program. The program is titled "CloudFare Airlines" and is currently in the "Add Flight Details" menu. The user has entered the following details: Flight No- jfk001, Departure (From)-JFK, Arrival (To)- Miami, Departure Date - 7/20/2025, Departure Time - 7pm, Total no of economy class seats -5, Total no of business class seats-3, Fare for an economy class person -500, and Fare for a business class person -1000. The program has successfully added the flight and displayed the "Add Flight Details" menu again. The right window is a text editor titled "ICW.py - C:\Users\User\Desktop\DOC333-ICW.py files\ICW.py (3.13.5)", showing the source code of the program. The code defines functions for adding flight details, registering a customer, and generating a flight ID. The code is written in Python 3.13.5.

Figure	Input	Expected Output	Actual Output	Result
3	5 (Flight No,Arrival (to),Departure Date,Departure Time,Yes/No)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Display Flight added successfully (Alongside Displaying the Add Flight Details menu)	Pass





```

#Individual Coursework-DOC333 ( Python-based Flight Reservation System )
#Initializing Variables
#q-question
Username=""
Password=""
ql=""
flights=[]
customers=[]

stafflogintitle="CloudFare Airlines"
stafflogintitle2="Staff Login"
Mainmenutitle="CloudFare Airlines"
Mainmenutitle2="Main Menu"

#Separate the system from the rest of the shell
line = "-"*80
print(line)

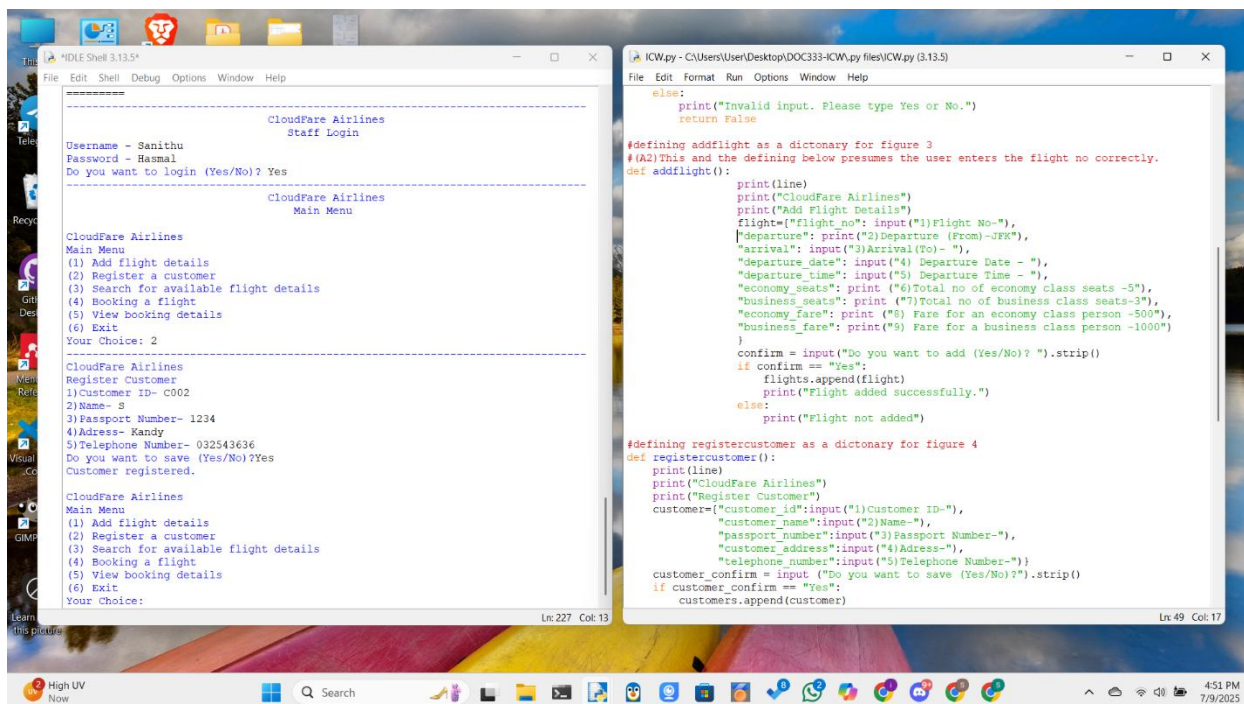
#Titles for Figure 1
print(stafflogintitle1.center(80))
print(stafflogintitle2.center(80))

#Tracking User inputs (Username and Password)
Username=str(input("Username -")).strip()
Password=str(input("Password -")).strip()

#(First Decision)Do you want to login (Yes/No)?
def login():
    ql = input("Do you want to login (Yes/No)? ").strip()
    if ql == "Yes":
        return True
    elif ql == "No":
        return False
    else:
        print("Invalid input. Please type Yes or No.")
        return False

```

Figure	Input	Expected Output	Actual Output	Result
4	6 (Customer ID,Name,Passport Number,Address,Telephone Number,Yes/No)	Customer registered. (Alongside Displaying register a customer menu)	Due to incorrect use of append I got an error.	Fixed the error by correctly entering, .append (for if condition)



```

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 2

CloudFare Airlines
Register Customer
1) Customer ID- C002
2) Name- S
3) Passport Number- 1234
4) Address- Kandy
5) Telephone Number- 032543636
Do you want to save (Yes/No)? Yes
Customer registered.

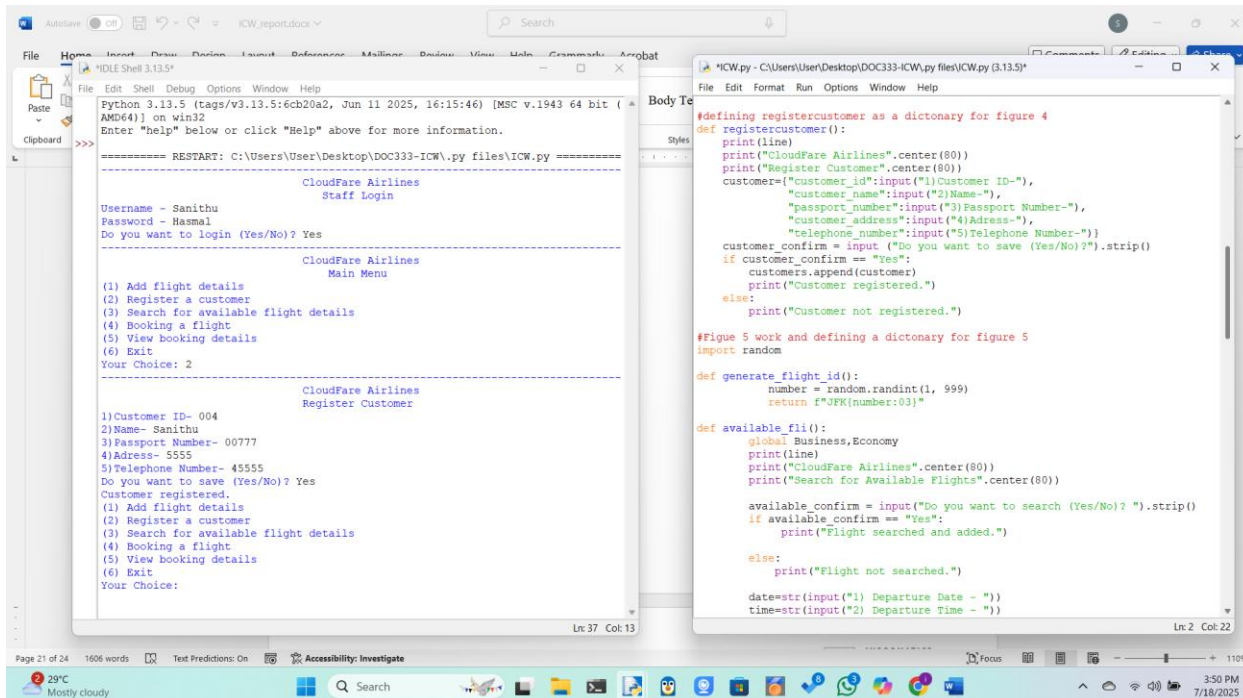
CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice:

def addflight():
    print(line)
    print("CloudFare Airlines")
    print("Add Flight Details")
    flight={"flight_no": input("1)Flight No-"),
            "departure": print("2)Departure (From)-JFK"),
            "arrival": input("3)Arrival(To)- "),
            "departure date": input("4) Departure Date - "),
            "departure time": input("5) Departure Time - "),
            "economy_seats": print("6)Total no of economy class seats -5"),
            "business_seats": print("7)Total no of business class seats-3"),
            "economy_fare": print("8) Fare for an economy class person -500"),
            "business_fare": print("9) Fare for a business class person -1000")}
    confirm = input("Do you want to add (Yes/No)? ").strip()
    if confirm == "Yes":
        flights.append(flight)
        print("Flight added successfully.")
    else:
        print("Flight not added")

def registercustomer():
    print(line)
    print("CloudFare Airlines")
    print("Register Customer")
    customer={"customer_id":input("1)Customer ID-"),
              "customer_name":input("2)Name-"),
              "passport_number":input("3)Passport Number-"),
              "customer_address":input("4)Address-"),
              "telephone number":input("5)Telephone Number-")}
    customer_confirm = input("Do you want to save (Yes/No)? ").strip()
    if customer_confirm == "Yes":
        customers.append(customer)

```

Figure	Input	Expected Output	Actual Output	Result
4	6 (Customer ID,Name,Passport Number,Address,Telephone Number, Yes/No)	Customer registered. (Alongside Displaying register a customer menu)	Customer registered. (Alongside Displaying register a customer menu)	Pass



The screenshot displays a Python IDE with two windows. The left window shows the output of a program where a customer is registered. The right window shows the source code for the program.

**Left Window Output:**

```
Python 3.13.5 (tags/v3.13.5:6cb20a2, Jun 11 2025, 16:15:46) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hammal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 2

CloudFare Airlines
Register Customer

1)Customer ID- 004
2)Name- Sanithu
3)Passport Number- 00777
4)Address- 5555
5)Telephone Number- 45555
Do you want to save (Yes/No)? Yes
Customer registered.
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice:
```

**Right Window Source Code:**

```
#defining registercustomer as a dictionary for figure 4
def registercustomer():
    print(line)
    print("CloudFare Airlines".center(80))
    print("Register Customer".center(80))
    customer={"customer_id":input("1)Customer ID-"),
              "customer_name":input("2)Name-"),
              "passport_number":input("3)Passport Number-"),
              "customer_address":input("4)Address-"),
              "telephone_number":input("5)Telephone Number-")}
    customer_confirm = input("Do you want to save (Yes/No)?").strip()
    if customer_confirm == "Yes":
        customers.append(customer)
        print("Customer registered.")
    else:
        print("Customer not registered.")

#Figure 5 work and defining a dictionary for figure 5
import random

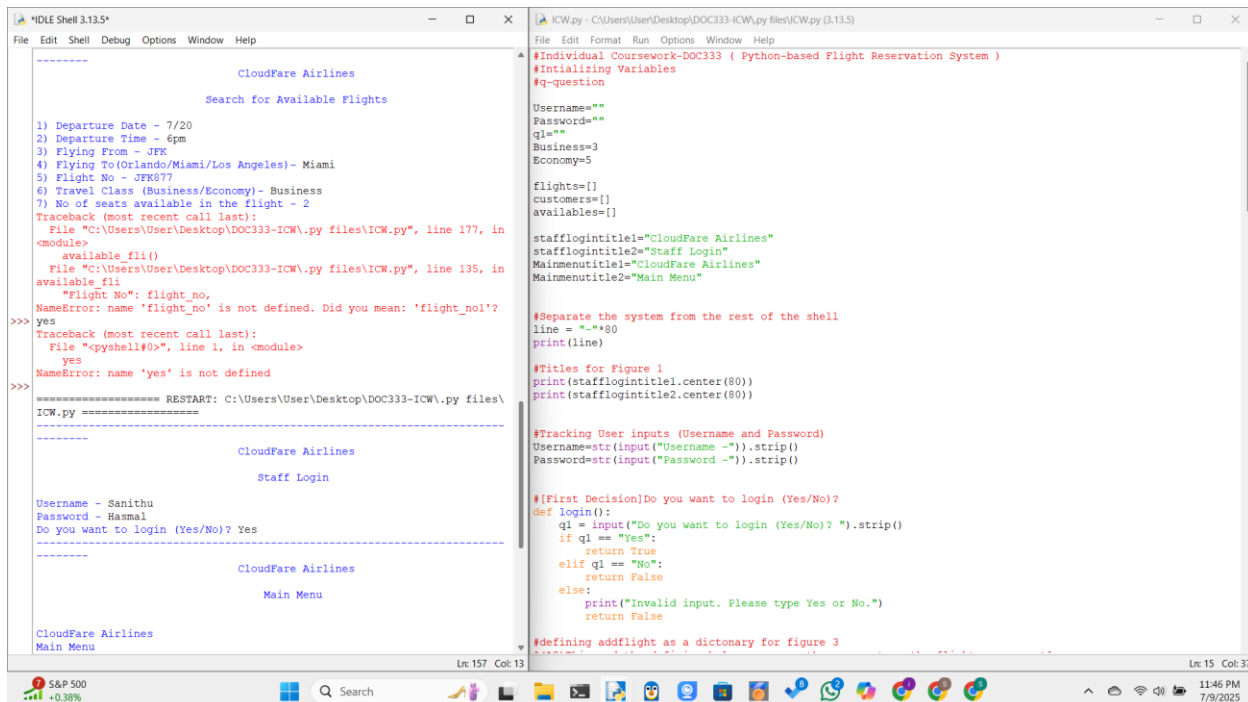
def generate_flight_id():
    number = random.randint(1, 999)
    return f"JFK{number:03}"

def available_fli():
    global Business,Economy
    print(line)
    print("CloudFare Airlines".center(80))
    print("Search for Available Flights".center(80))

    available_confirm = input("Do you want to search (Yes/No)? ").strip()
    if available_confirm == "Yes":
        print("Flight searched and added.")
    else:
        print("Flight not searched.")

    date=str(input("1) Departure Date - "))
    time=str(input("2) Departure Time - "))
```

Figure	Input	Expected Output	Actual Output	Result
4	6 (Customer ID,Name,Passport Number,Address,Telephone Number,Yes/No)	Customer registered. (Alongside Displaying register a customer menu)	Customer registered. (Alongside Displaying register a customer menu)	Pass



```

CloudFare Airlines
Search for Available Flights

1) Departure Date - 7/20
2) Departure Time - 6pm
3) Flying From - JFK
4) Flying To(Orlando/Miami/Los Angeles)- Miami
5) Flight No - JFKG77
6) Travel Class (Business/Economy)- Business
7) No of seats available in the flight - 2
Traceback (most recent call last):
  File "C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py", line 177, in
    available_fli()
    File "C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py", line 135, in
    available_fli
      "Flight No": flight_no,
NameError: name 'flight_no' is not defined. Did you mean: 'flight_nol'?
>>> yes
Traceback (most recent call last):
  File "<pyshell#0>", line 1, in <module>
    yes
NameError: name 'yes' is not defined
>>>

===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\
ICW.py =====

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu

Ln: 157 Col: 13

#Individual Coursework-DOC333 ( Python-based Flight Reservation System )
#Initializing Variables
#q-question
Username=""
Password=""
ql=""
Business=3
Economy=5
flights=[]
customers=[]
availables=[]

stafflogintitle1="CloudFare Airlines"
stafflogintitle2="Staff Login"
Mainmenutitle1="CloudFare Airlines"
Mainmenutitle2="Main Menu"

#Separate the system from the rest of the shell
line = "-"*80
print(line)

#Titles for Figure 1
print(stafflogintitle1.center(80))
print(stafflogintitle2.center(80))

#Tracking User inputs (Username and Password)
Username=str(input("Username - ")).strip()
Password=str(input("Password - ")).strip()

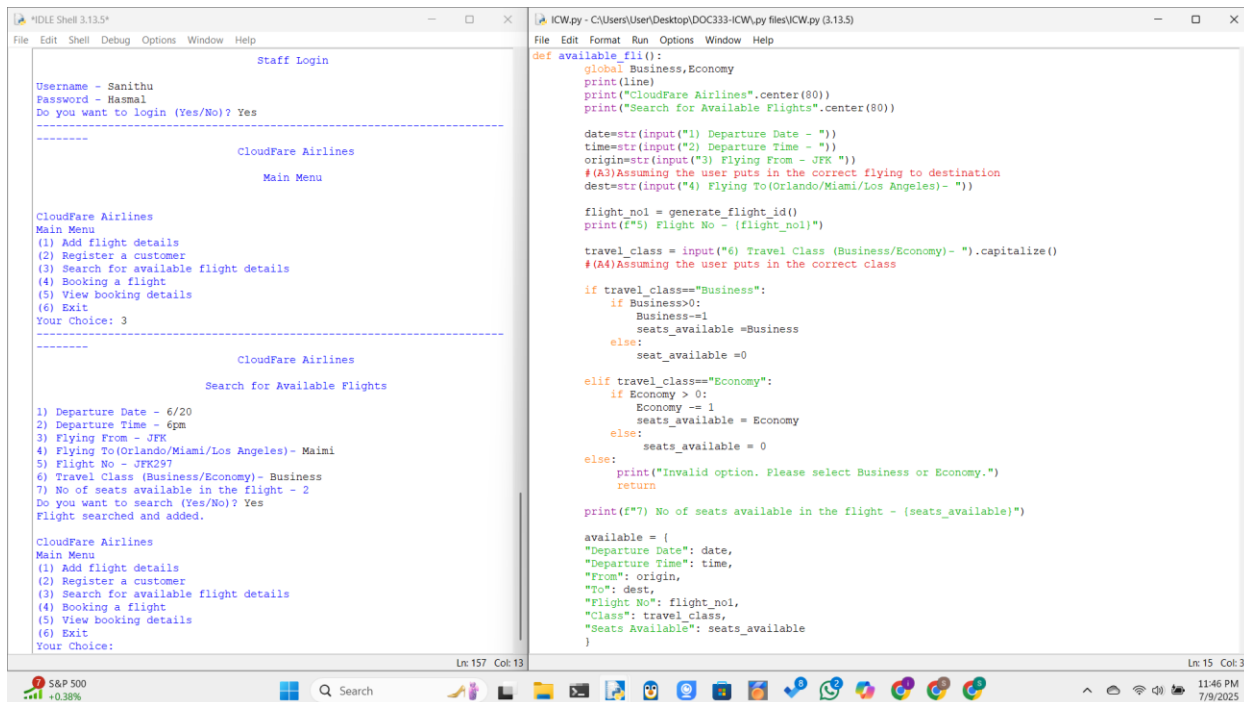
#(First Decision)Do you want to login (Yes/No)?
def login():
    ql = input("Do you want to login (Yes/No)? ").strip()
    if ql == "Yes":
        return True
    elif ql == "No":
        return False
    else:
        print("Invalid input. Please type Yes or No.")
        return False

#defining addflight as a dictionary for figure 3

```

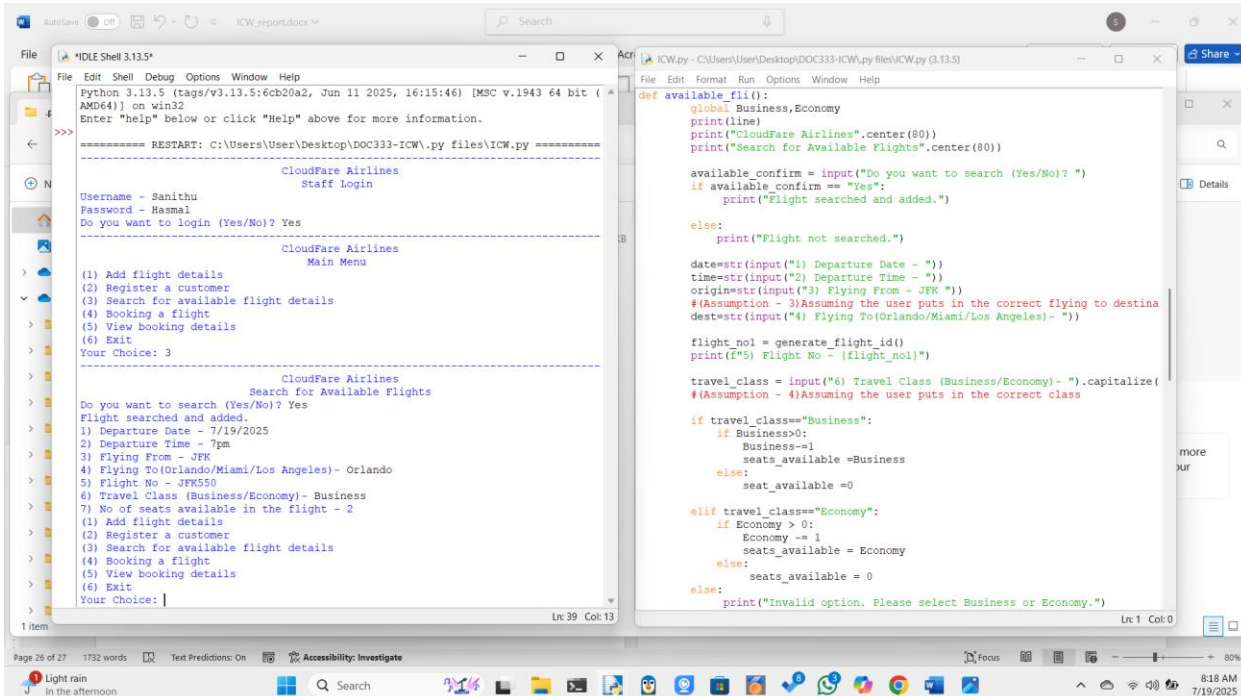
Figure	Input	Expected Output	Actual Output	Result
5	<p>4 – Manual (Departure Date,Time,Flying to, Business/Economy)</p> <p>2- Autogenerated (Flight No,Available Seat No)</p>	Flight searched and added. (Alongside Displaying search for flight details menu)	Error due to how entered a wrong variable when I was trying to enter a variable to generate flight No.	Had to change flight_no to flight_no 1.





The screenshot displays a Python IDE with two panes. The left pane shows the output of a program titled 'CloudFare Airlines'. It includes a 'Staff Login' section with a username 'Sanithu' and password 'Hasmal'. Below this is a 'Main Menu' with options: (1) Add flight details, (2) Register a customer, (3) Search for available flight details, (4) Booking a flight, (5) View booking details, and (6) Exit. The user has chosen option 3. The output then shows a 'Search for Available Flights' section with details: 1) Departure Date - 6/20, 2) Departure Time - 6pm, 3) Flying From - JFK, 4) Flying To (Orlando/Miami/Los Angeles) - Maimi, 5) Flight No - JFK29, 6) Travel Class (Business/Economy) - Business, 7) No of seats available in the flight - 2. The user has chosen option 3, and the output shows 'Flight searched and added.' The right pane shows the source code for the program, which includes a function 'available\_fli()' that handles the search logic. It uses a dictionary to store flight details and a list to track available seats. The code includes comments for assumptions and a final print statement showing the number of seats available.

Figure	Input	Expected Output	Actual Output	Result
5	<p>4 – Manual (Departure Date, Time, Flying to, Business/Economy)</p> <p>2- Autogenerated (Flight No, Available Seat No)</p>	<p>Flight searched and added. (Alongside Displaying search for flight details menu)</p>	<p>Flight searched and added. (Alongside Displaying search for flight details menu)</p>	Pass



The screenshot displays a Python IDE with two panes. The left pane shows the output of a flight booking application. The right pane shows the source code for the application.

**Output (Left Pane):**

```
Python 3.13.5 (tags/v3.13.5:6cb20a2, Jun 11 2025, 16:15:46) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 3

CloudFare Airlines
Search for Available Flights

Do you want to search (Yes/No)? Yes
Flight searched and added.
1) Departure Date - 7/19/2025
2) Departure Time - 7pm
3) Flying From - JFK
4) Flying To(Orlando/Miami/Los Angeles)- Orlando
5) Flight No - JFK550
6) Travel Class (Business/Economy)- Business
7) No of seats available in the flight - 2
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: |
```

**Source Code (Right Pane):**

```
def available_fli():
    global Business,Economy
    print(line)
    print("CloudFare Airlines".center(80))
    print("Search for Available Flights".center(80))

    available_confirm = input("Do you want to search (Yes/No)? ")
    if available_confirm == "Yes":
        print("Flight searched and added.")
    else:
        print("Flight not searched.")

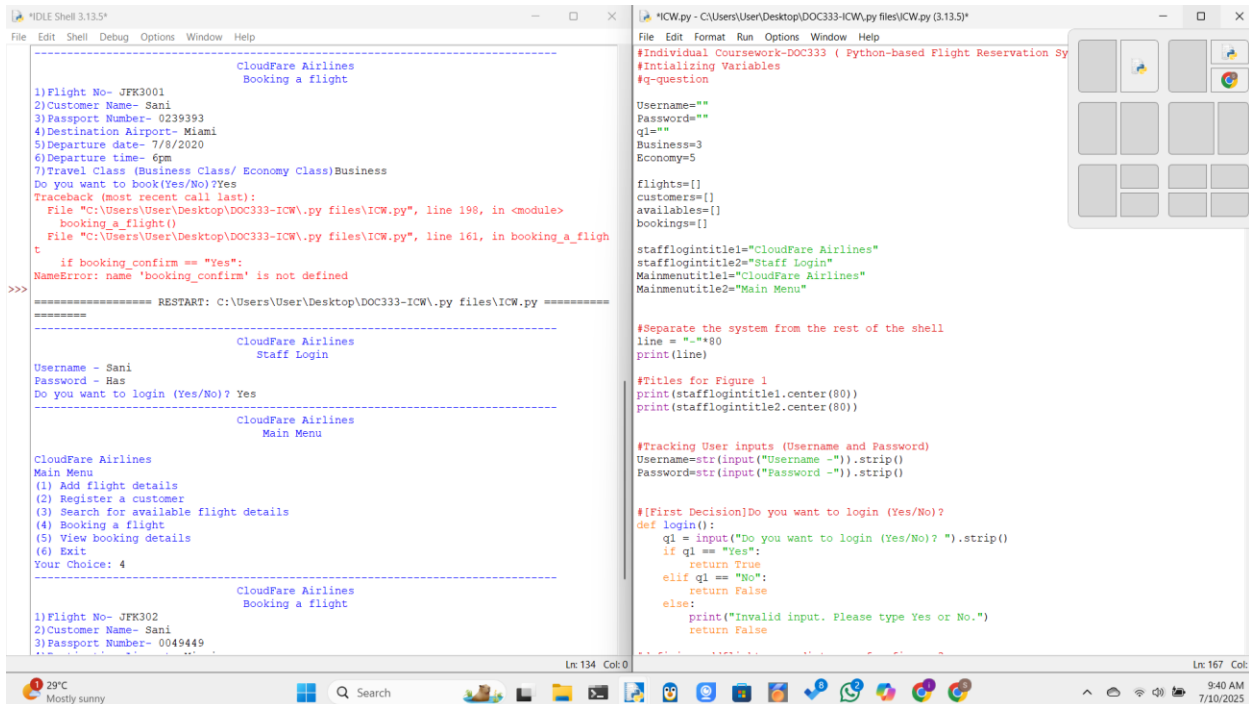
    date=str(input("1) Departure Date - "))
    time=str(input("2) Departure Time - "))
    origin=str(input("3) Flying From - JFK "))
    #Assumption - 3)Assuming the user puts in the correct flying to destina
    dest=str(input("4) Flying To(Orlando/Miami/Los Angeles)- "))

    flight_no1 = generate_flight_id()
    print(f"5) Flight No - {flight_no1}")

    travel_class = input("6) Travel Class (Business/Economy)- ").capitalize()
    #Assumption - 4)Assuming the user puts in the correct class

    if travel_class=="Business":
        if Business>0:
            Business-=1
            seats_available =Business
        else:
            seats_available =0
    elif travel_class=="Economy":
        if Economy > 0:
            Economy -= 1
            seats_available = Economy
        else:
            seats_available = 0
    else:
        print("Invalid option. Please select Business or Economy.")
```

Figure	Input	Expected Output	Actual Output	Result
5	4 – Manual (Departure Date,Time,Flying to, Business/Economy)  2- Autogenerated (Flight No,Available Seat No)	Flight searched and added. (Alongside Displaying search for flight details menu)	Flight searched and added. (Alongside Displaying search for flight details menu)	Pass



```

CloudFare Airlines
Booking a flight

1)Flight No- JFK3001
2)Customer Name- Sani
3)Passport Number- 0239393
4)Destination Airport- Miami
5)Departure date- 7/8/2020
6)Departure time- 6pm
7)Travel Class (Business Class/ Economy Class)Business
Do you want to book(Yes/No)?Yes
Traceback (most recent call last):
  File "C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py", line 198, in <module>
    booking_a_flight()
  File "C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py", line 161, in booking_a_flight
    if booking_confirm == "Yes":
NameError: name 'booking_confirm' is not defined
>>>
===== RESTART: C:\Users\User\Desktop\DOC333-ICW\py files\ICW.py =====

CloudFare Airlines
Staff Login

Username - Sani
Password - Has
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 4

CloudFare Airlines
Booking a flight

1)Flight No- JFK302
2)Customer Name- Sani
3)Passport Number- 0049449
  
```

```

#Individual Coursework-DOC333 ( Python-based Flight Reservation System)
#Initializing Variables
#q-question

Username=""
Password=""
q1=""
Business=3
Economy=5

flights=[]
customers=[]
availables=[]
bookings=[]

stafflogintitle1="CloudFare Airlines"
stafflogintitle2="Staff Login"
Mainmenutitle1="CloudFare Airlines"
Mainmenutitle2="Main Menu"

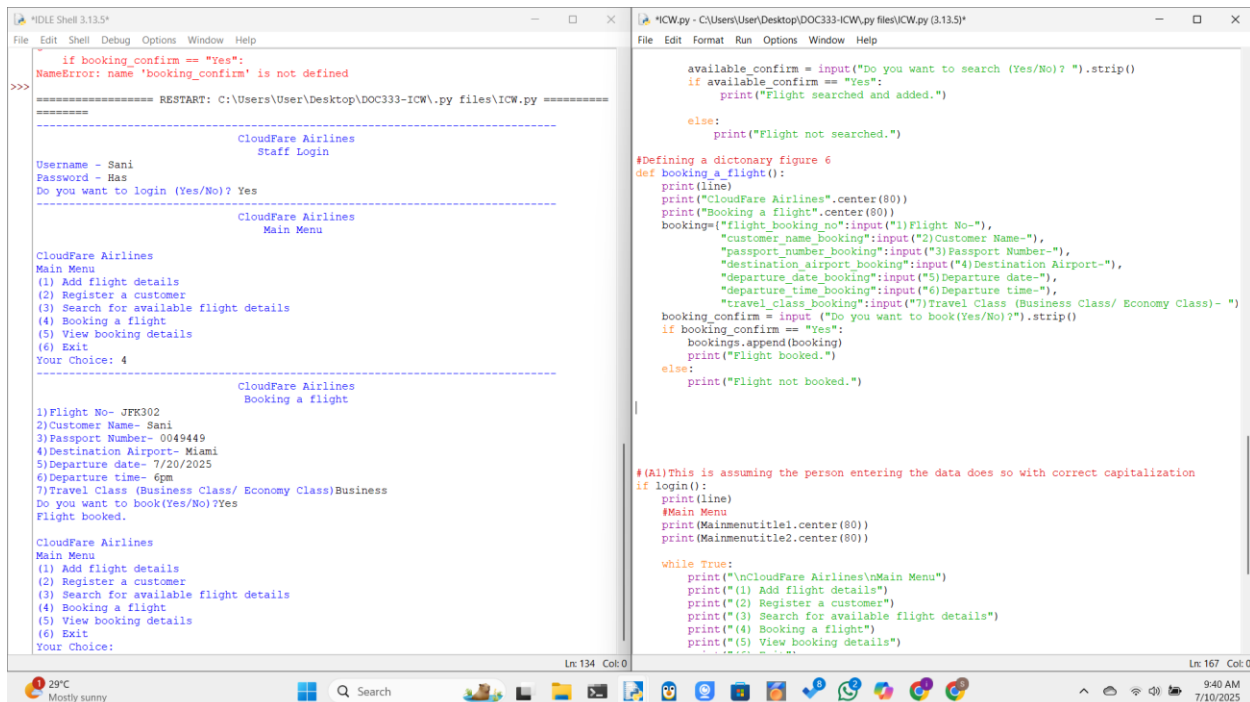
#Separate the system from the rest of the shell
line = "-"*80
print(line)

#Titles for Figure 1
print(stafflogintitle1.center(80))
print(stafflogintitle2.center(80))

#Tracking User inputs (Username and Password)
Username=str(input("Username -")).strip()
Password=str(input("Password -")).strip()

#[First Decision]Do you want to login (Yes/No)?
def login():
    q1 = input("Do you want to login (Yes/No)? ").strip()
    if q1 == "Yes":
        return True
    elif q1 == "No":
        return False
    else:
        print("Invalid input. Please type Yes or No.")
        return False
  
```

Figure	Input	Expected Output	Actual Output	Result
6	8 (No,Name,Number,Airport,date,time,class,Yes/No)	Flight booked. (Alongside Displaying view booking details menu)	Error due to using an undefined variable.	Defined the variable and fixed the error.



```

if booking_confirm == "Yes":
    NameError: name 'booking_confirm' is not defined
=====
CloudFare Airlines
Staff Login

Username - Sani
Password - Has
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 4

CloudFare Airlines
Booking a flight

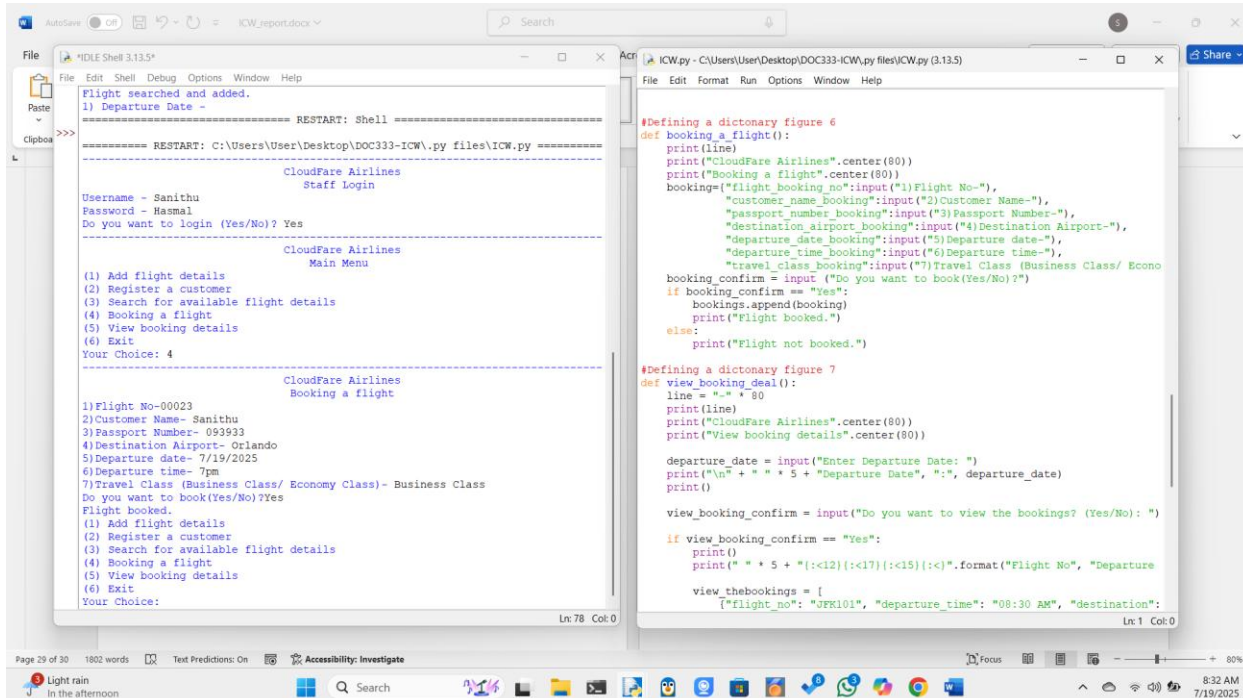
1)Flight No- JFK302
2)Customer Name- Sani
3)Passport Number- 0049449
4)Destination Airport- Miami
5)Departure date- 7/20/2025
6)Departure time- 6pm
7)Travel Class (Business Class/ Economy Class)- Business
Do you want to book(Yes/No)?Yes
Flight booked.

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice:

#(All)This is assuming the person entering the data does so with correct capitalization
if login():
    print(line)
    #Main Menu
    print(Mainmenutitle1.center(80))
    print(Mainmenutitle2.center(80))

    while True:
        print("\nCloudFare Airlines\nMain Menu")
        print("(1) Add flight details")
        print("(2) Register a customer")
        print("(3) Search for available flight details")
        print("(4) Booking a flight")
        print("(5) View booking details")
    
```

Figure	Input	Expected Output	Actual Output	Result
6	8 (No,Name,Number,Airport,date,time,class,Yes/No)	Flight booked. (Alongside Displaying view booking details menu)	Flight booked. (Alongside Displaying view booking details menu)	Pass



```

#Defining a dictionary figure 6
def booking_a_flight():
    print(line)
    print("CloudFare Airlines".center(80))
    print("Booking a flight".center(80))
    booking={"flight_booking_no":input("1)Flight No-"),
            "customer_name_booking":input("2)Customer Name-"),
            "passport_number_booking":input("3)Passport Number-"),
            "destination_airport_booking":input("4)Destination Airport-"),
            "departure_date_booking":input("5)Departure date-"),
            "departure_time_booking":input("6)Departure time-"),
            "travel_class_booking":input("7)Travel Class (Business Class/ Econo

    booking_confirm = input ("Do you want to book(Yes/No)?")
    if booking_confirm == "Yes":
        bookings.append(booking)
        print("Flight booked.")
    else:
        print("Flight not booked.")

#Defining a dictionary figure 7
def view_booking_details():
    line = "-" * 80
    print(line)
    print("CloudFare Airlines".center(80))
    print("View booking details".center(80))

    departure_date = input("Enter Departure Date: ")
    print("\n" + "-" * 5 + "Departure Date", ":", departure_date)
    print()

    view_booking_confirm = input("Do you want to view the bookings? (Yes/No): ")
    if view_booking_confirm == "Yes":
        print()
        print(" " * 5 + "[:<12)[:<17)[:<15][:<15]).format("Flight No", "Departure
        view_thebookings = [
            ["flight_no": "JFK101", "departure_time": "08:30 AM", "destination":

```

Figure	Input	Expected Output	Actual Output	Result
6	8 (No,Name,Number,Airport,date,time,class, Yes/No)	Flight booked. (Alongside Displaying view booking details menu)	Flight booked. (Alongside Displaying view booking details menu)	Pass

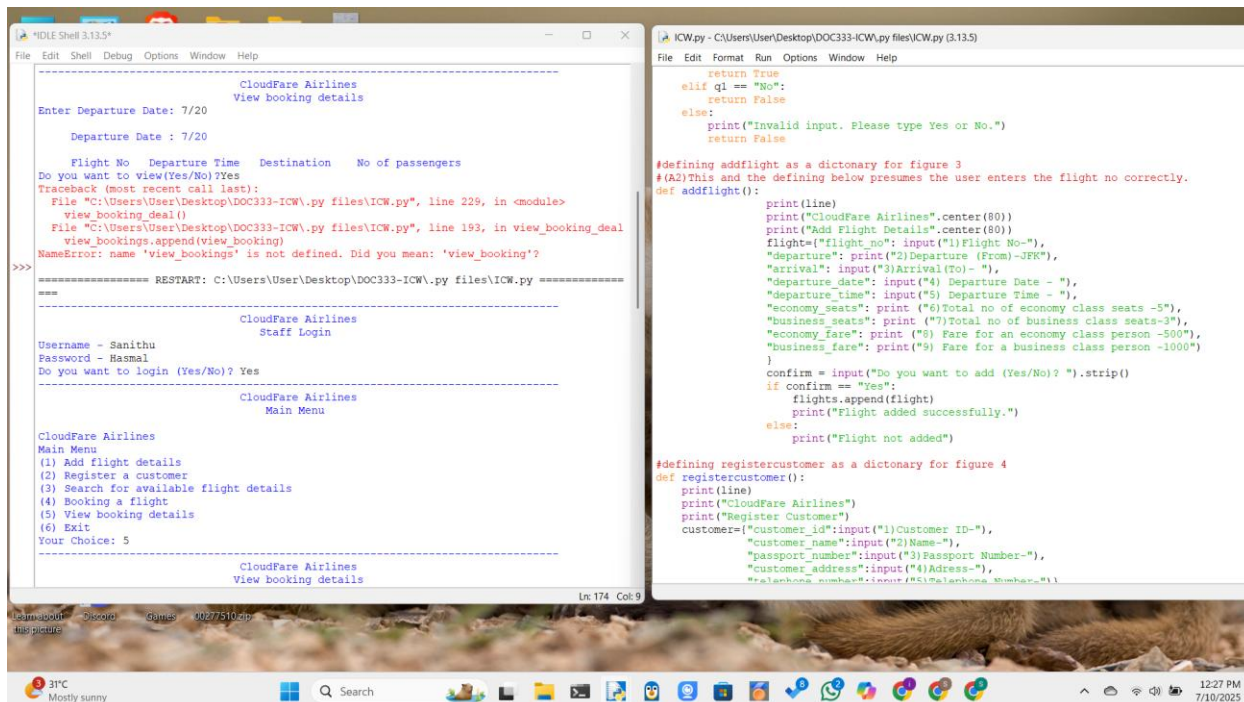
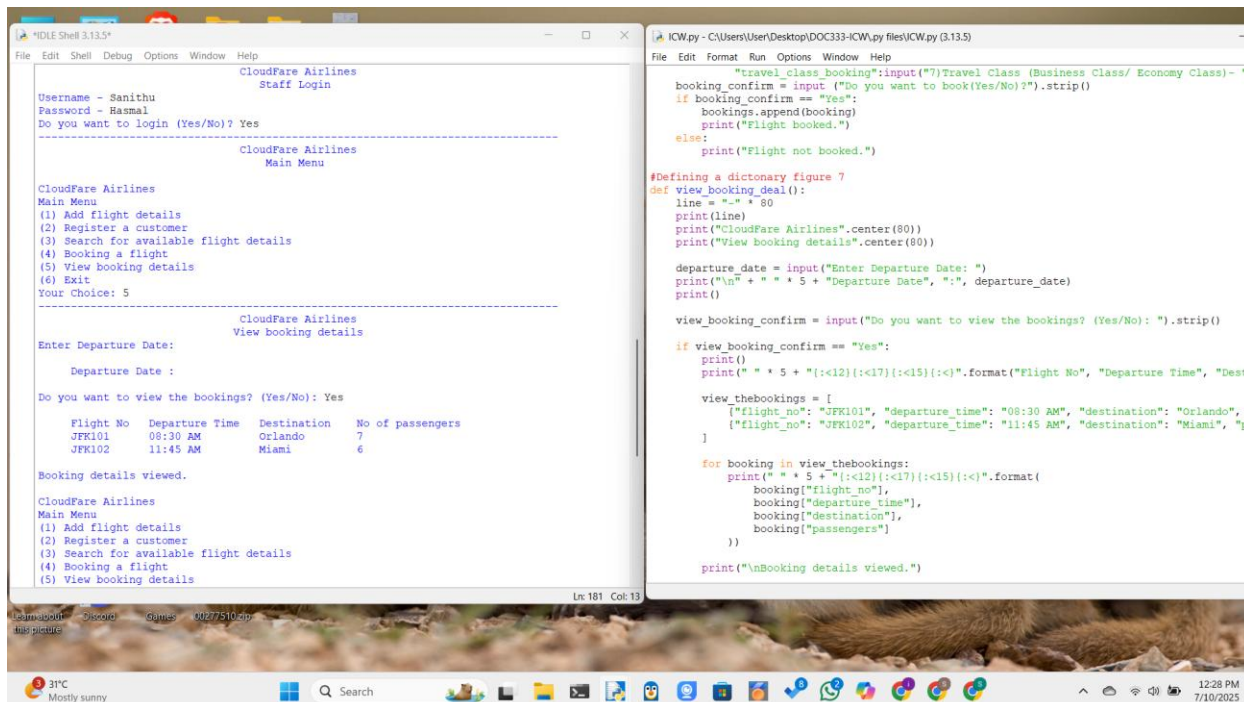


Figure	Input	Expected Output	Actual Output	Result
7	2	Booking details viewed. (Alongside Displaying View Booking Details)	Error due to using an undefined variable.	Fixed error by changing variable name.





```

CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 5

CloudFare Airlines
View booking details

Enter Departure Date:
Departure Date :
Do you want to view the bookings? (Yes/No): Yes

Flight No  Departure Time  Destination  No of passengers
JFK101      08:30 AM             Orlando      7
JFK102      11:45 AM             Miami        6

Booking details viewed.

CloudFare Airlines
Main Menu
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
    
```

```

travel_class_booking=input("Travel Class (Business Class/ Economy Class)- ")
booking_confirm = input ("Do you want to book(Yes/No)?").strip()
if booking_confirm == "Yes":
    bookings.append(booking)
    print("Flight booked.")
else:
    print("Flight not booked.")

#Defining a dictionary figure 7
def view_booking_details():
    line = "-" * 80
    print(line)
    print("CloudFare Airlines".center(80))
    print("View booking details".center(80))

    departure_date = input("Enter Departure Date: ")
    print("\n" + "-" * 5 + "Departure Date", ":", departure_date)
    print()

    view_booking_confirm = input("Do you want to view the bookings? (Yes/No): ").strip()

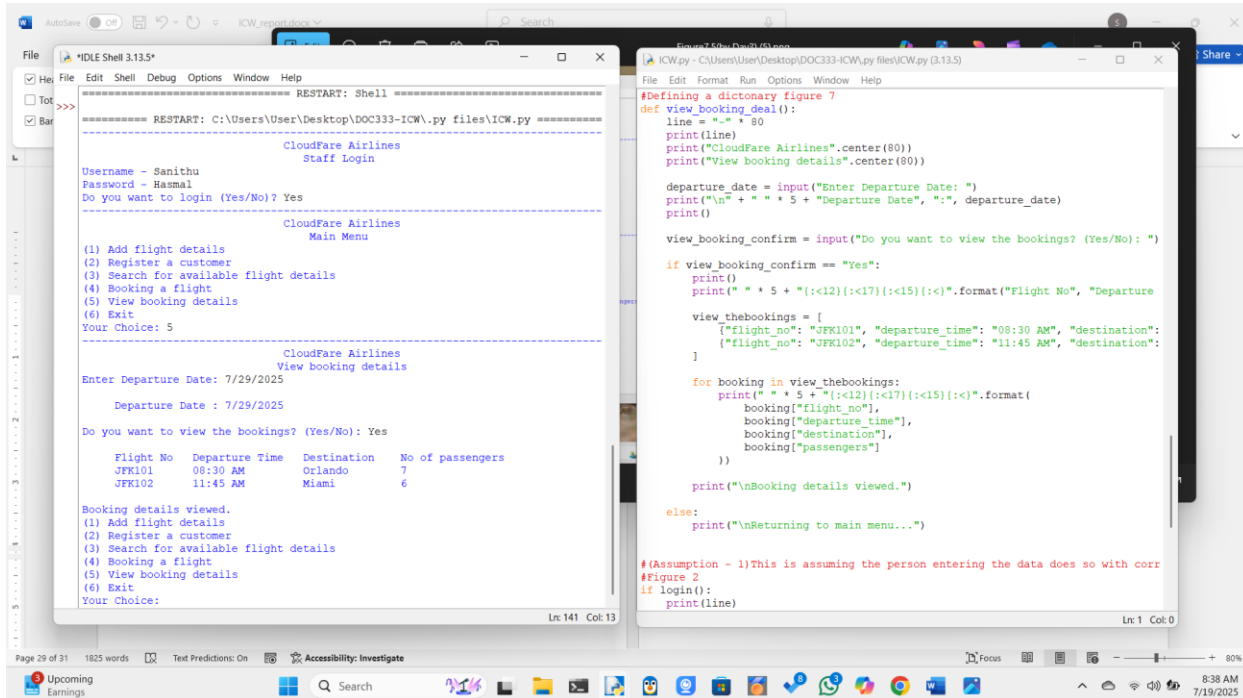
    if view_booking_confirm == "Yes":
        print()
        print("-" * 5 + "Flight No", "Departure Time", "Desti")

        view_thebookings = [
            {"flight_no": "JFK101", "departure_time": "08:30 AM", "destination": "Orlando", "passengers": 7},
            {"flight_no": "JFK102", "departure_time": "11:45 AM", "destination": "Miami", "passengers": 6}
        ]

        for booking in view_thebookings:
            print("-" * 5 + "Flight No", "Departure Time", "Destination", "Passengers".format(
                booking["flight_no"],
                booking["departure_time"],
                booking["destination"],
                booking["passengers"]
            ))

        print("\nBooking details viewed.")
    
```

Figure	Input	Expected Output	Actual Output	Result
7	2	Booking details viewed. (Alongside Displaying View Booking Details)	Booking details viewed. (Alongside Displaying View Booking Details)	Pass



```

===== RESTART: Shell =====
CloudFare Airlines
Staff Login

Username - Sanithu
Password - Hasmal
Do you want to login (Yes/No)? Yes

CloudFare Airlines
Main Menu

(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice: 5

CloudFare Airlines
View booking details

Enter Departure Date: 7/29/2025
Departure Date : 7/29/2025

Do you want to view the bookings? (Yes/No): Yes

Flight No  Departure Time  Destination  No of passengers
JFK101      08:30 AM         Orlando      7
JFK102      11:45 AM         Miami        6

Booking details viewed.
(1) Add flight details
(2) Register a customer
(3) Search for available flight details
(4) Booking a flight
(5) View booking details
(6) Exit
Your Choice:

#Defining a dictionary figure 7
def view_booking_detail():
    line = "-" * 80
    print(line)
    print("CloudFare Airlines".center(80))
    print("View booking details".center(80))

    departure_date = input("Enter Departure Date: ")
    print("\n" + "-" * 5 + "Departure Date", ":", departure_date)
    print()

    view_booking_confirm = input("Do you want to view the bookings? (Yes/No): ")

    if view_booking_confirm == "Yes":
        print()
        print("-" * 5 + "Flight No", "Departure",
              "Flight No", "Departure Time", "Destination", "No of passengers")

        view_thebookings = {
            "flight_no": "JFK101", "departure_time": "08:30 AM", "destination":
            "Orlando", "passengers": 7,
            "flight_no": "JFK102", "departure_time": "11:45 AM", "destination":
            "Miami", "passengers": 6
        }

        for booking in view_thebookings:
            print("-" * 5 + "Flight No", "Departure", "Flight No", "Departure Time",
                  "Destination", "No of passengers")
            booking["flight_no"],
            booking["departure_time"],
            booking["destination"],
            booking["passengers"]

        print("\nBooking details viewed.")

    else:
        print("\nReturning to main menu...")

#(Assumption - 1) This is assuming the person entering the data does so with corr
#Figure 2
if login():
    print(line)
    
```

Figure	Input	Expected Output	Actual Output	Result
7	2	Booking details viewed. (Alongside Displaying View Booking Details)	Booking details viewed. (Alongside Displaying View Booking Details)	Pass



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