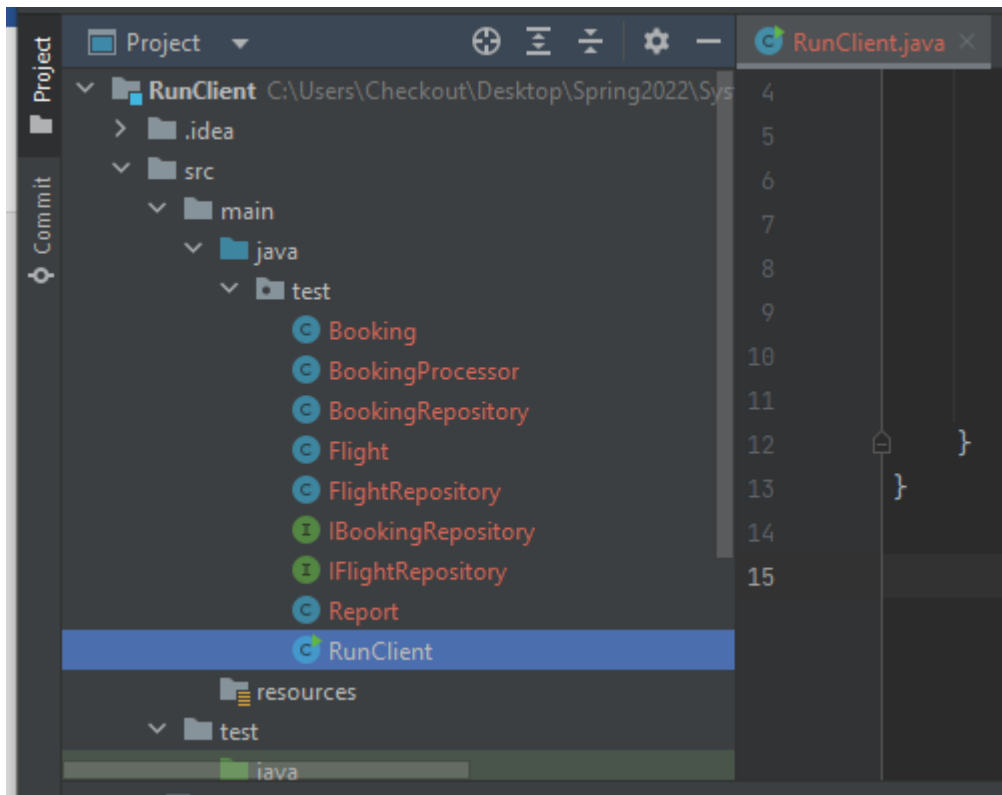


Flight Booking Application - Individual Project

1) Below is the Folder Structure of the application as expected



2) Steps to Execute

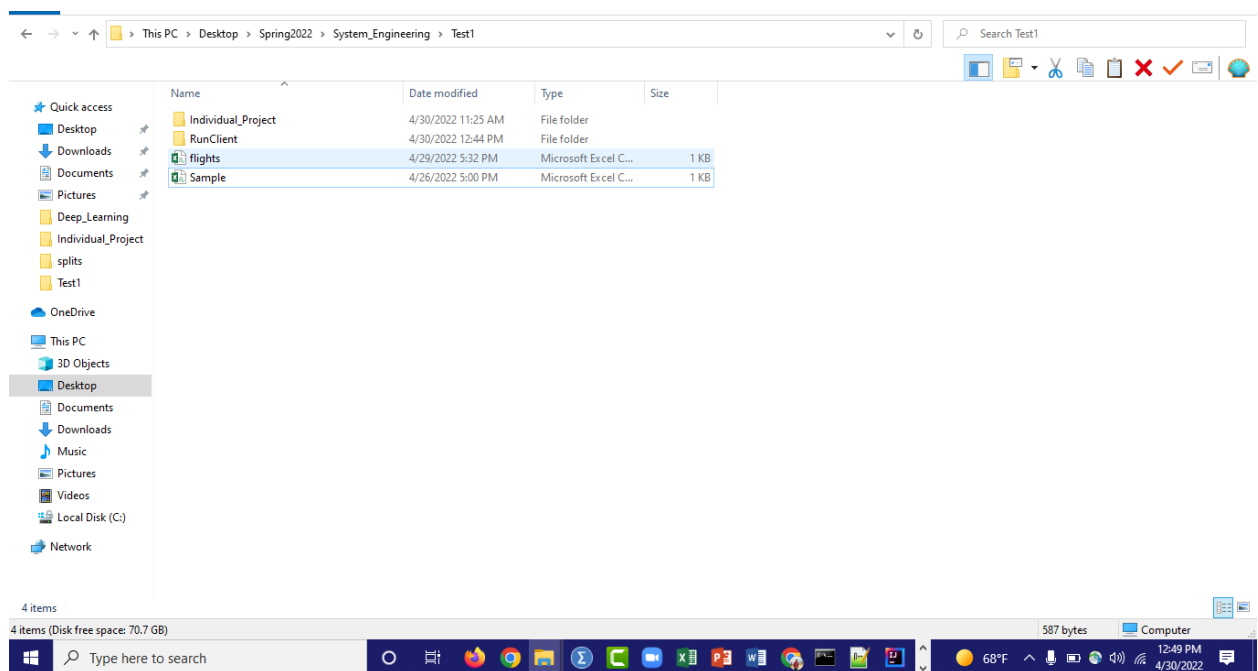
a) Mvn compile

```
[INFO] Building RunClient 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ RunClient ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ RunClient ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.818 s
[INFO] Finished at: 2022-04-30T12:43:09-07:00
[INFO] -----
```

b) Mvn clean install

```
[INFO] Building RunClient 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ RunClient ---
[INFO] Deleting C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\target
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ RunClient ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ RunClient ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 9 source files to C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\target\classes
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ RunClient ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\src\test\resources
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ RunClient ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ RunClient ---
[INFO] No tests to run.
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ RunClient ---
[INFO] Building jar: C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\target\RunClient-1.0-SNAPSHOT.jar
[INFO] --- maven-install-plugin:2.4:install (default-install) @ RunClient ---
[INFO] Installing C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\target\RunClient-1.0-SNAPSHOT.jar to C:\Users\Checkout\.m2\repository\org\example\RunClient\1.0-SNAPSHOT\RunClient-1.0-SNAPSHOT.jar
[INFO] Installing C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\RunClient\pom.xml to C:\Users\Checkout\.m2\repository\org\example\RunClient\1.0-SNAPSHOT\RunClient-1.0-SNAPSHOT.pom
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.244 s
[INFO] Finished at: 2022-04-30T12:44:53-07:00
[INFO] -----
```

c) Before Running the below command only Sample.csv and flights.csv is present in the Test1 Directory

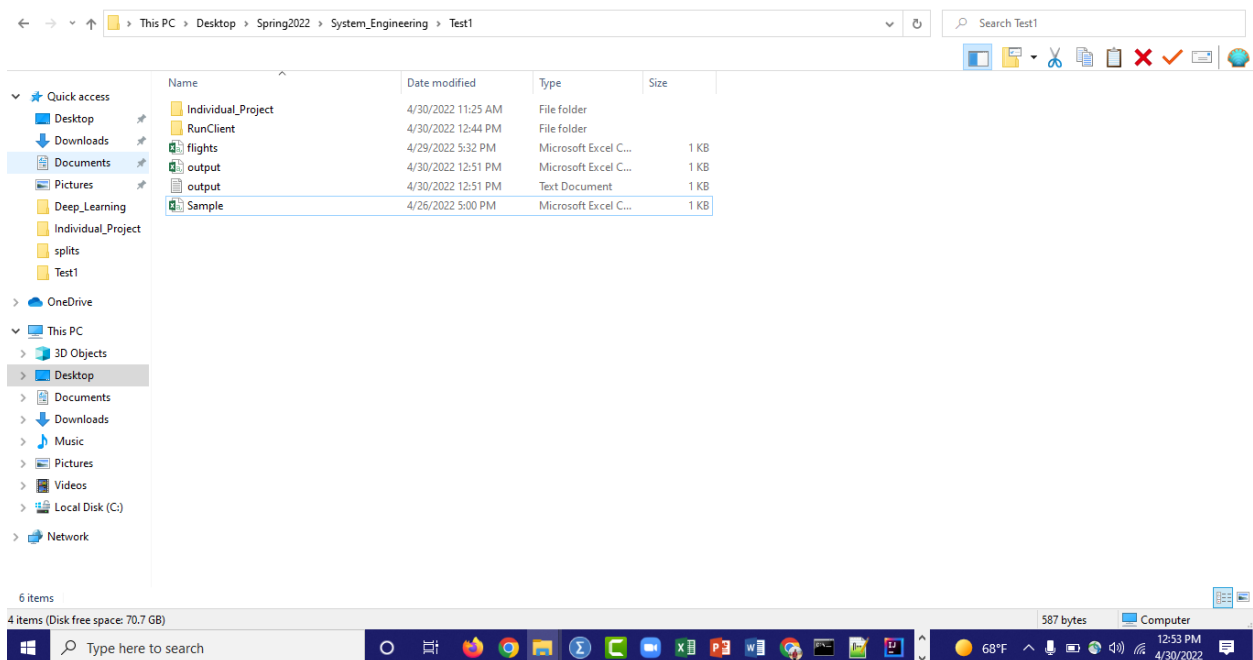


- d) Command to generate output.csv and output.txt based on the inputs of Sample.csv and flights.csv

```
mvn exec:java -Dexec.mainClass=test.RunClient -
Dexec.args="C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\Sam
ple.csv C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\flights.csv
C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\output.csv
C:\Users\Checkout\Desktop\Spring2022\System_Engineering\Test1\output.txt"
```

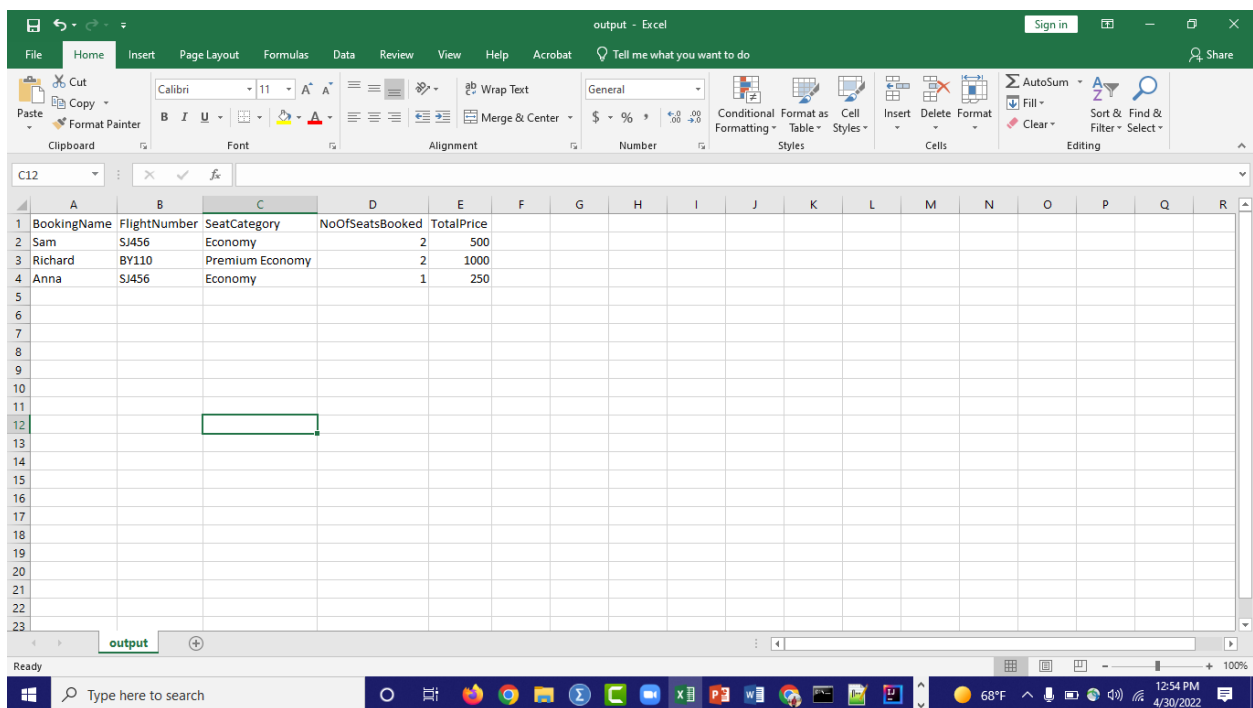
```
[INFO] Building RunClient 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- exec-maven-plugin:3.0.0:java (default-cli) @ RunClient ---
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.823 s
[INFO] Finished at: 2022-04-30T12:51:57-07:00
[INFO] -----
```

Output.csv and output.txt file is generated by executing the above command in Test1 Folder



e) Below are the contents of output.csv and output.txt file

Output.csv



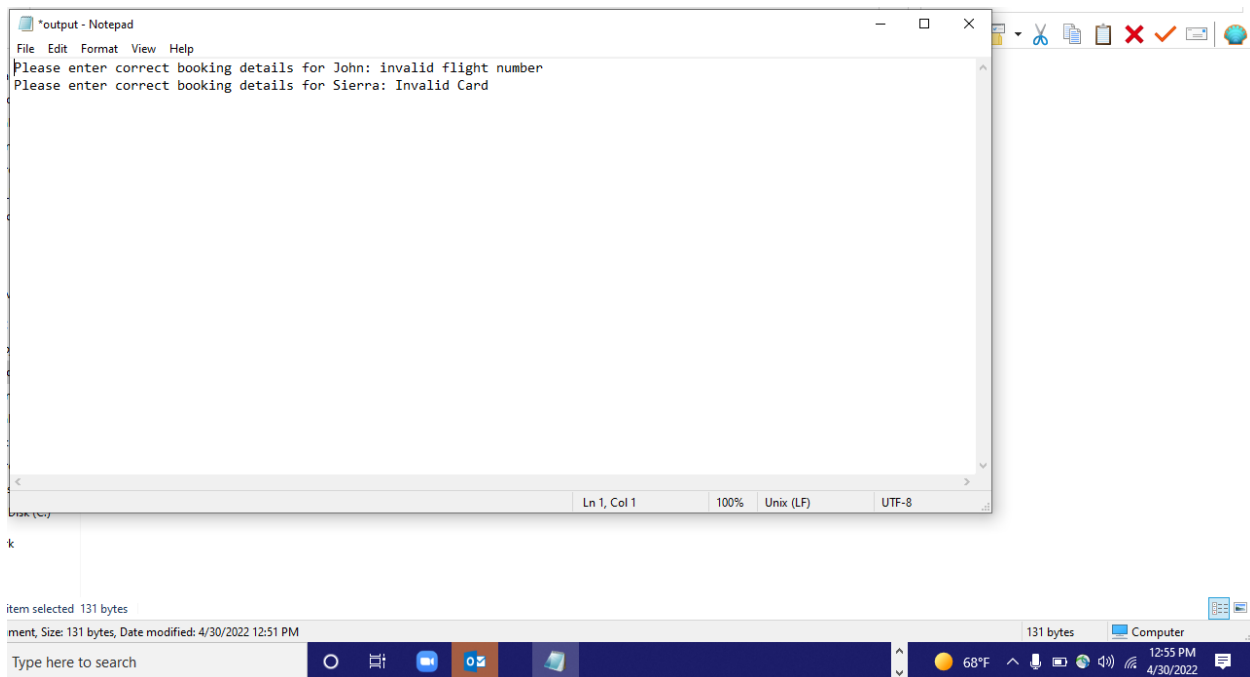
The screenshot shows a Microsoft Excel spreadsheet titled "output - Excel". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	BookingName	FlightNumber	SeatCategory	NoOfSeatsBooked	TotalPrice													
2	Sam	SJ456	Economy	2	500													
3	Richard	BY110	Premium Economy	2	1000													
4	Anna	SJ456	Economy	1	250													
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
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23																		

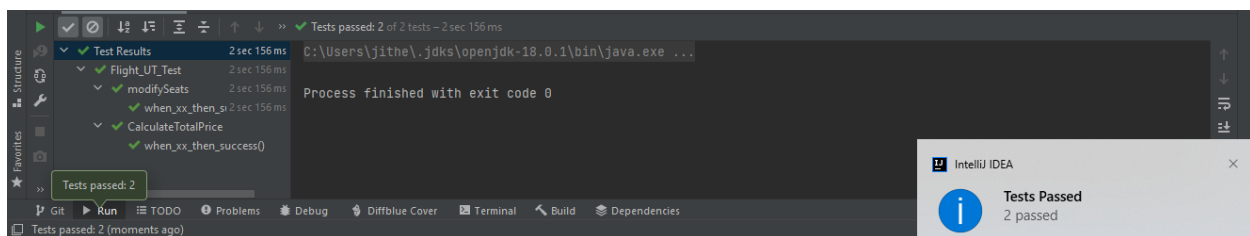
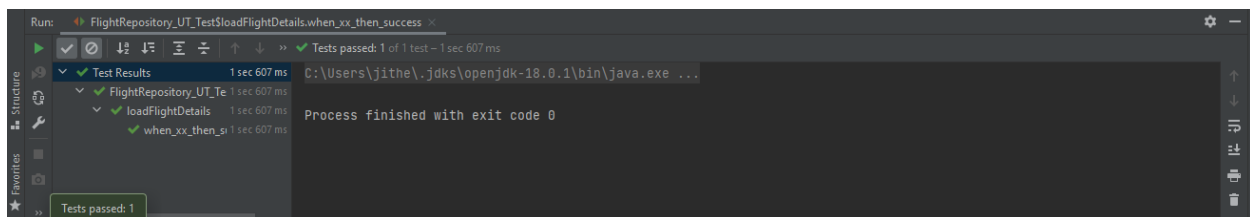
The table is located in the range A1:R23. The columns are labeled A through R, and the rows are numbered 1 through 23. The data is organized into a table with 5 columns: BookingName, FlightNumber, SeatCategory, NoOfSeatsBooked, and TotalPrice. The data is as follows:

BookingName	FlightNumber	SeatCategory	NoOfSeatsBooked	TotalPrice
Sam	SJ456	Economy	2	500
Richard	BY110	Premium Economy	2	1000
Anna	SJ456	Economy	1	250

Output.txt



3) Junit Test Case Results



[illegible]

1) Repository Design Pattern

2) Visitor Design Pattern

3) Iterator Pattern

Iterator pattern is used to get a way to access the elements of a collection of objects in a sequential manner. Booking and flight details are loaded in array list to perform operations on the application. Interfaces and methods are created so that data are accessed from arraylist of flight and booking input files and once the transaction is completed the files are updated.