Colby Wirth

COS 285

Assignment 3

Dr. Behrooz Mansouri

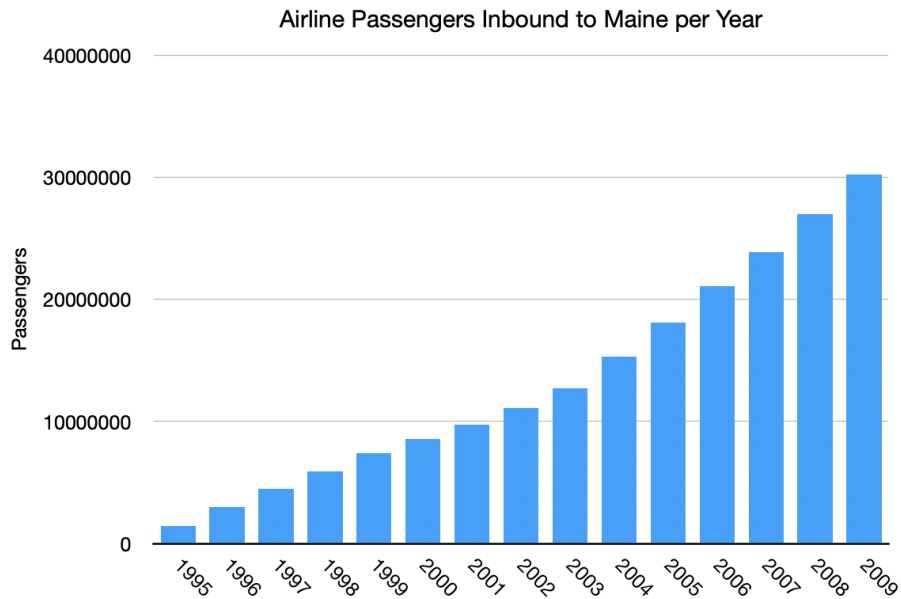1 October 2024

Analysis for Program 3 sub-tasks

File Input

As discussed in Labs 1 and 2, The time complexity of the file input method is $O(10n)$ as each line element has ten comma separated values which are all parsed one time. This time complexity simplifies to $O(n)$.

Iterating on each Origin chain Airport (Question 6)

The Flight Iterator 'MyItr' executes on a MyLinkedList object in $O(n)$ time complexity where n is the number of Nodes linked via 'nextAirport'. Each element is read one time therefore there are n iterations.

Total outputs (Question 7)

Airline Passengers Inbound to Maine per Year

The results from program3 indicate that there were no flights to AUG from 1995 to 2002. Hence there were only two Maine airports in flights.csv which had outbound flights until 2003. Additionally the number of passengers appears to be extremely high. With records of tens of millions of inbound passengers per year, these numbers are extremely inflated and are on-par with large airports like Logan international.