

EE582:
(Due: 4/18/2008)

Monte Carlo Approach Assignment

United airlines, Inc. flies out of Seattle to different cities around the US. The daily flights to these cities are shown in table 1 for the first week of August. During that week, 10,000 passengers were served. Using the following information:

- a) Passengers leaving from Seattle live within 50 mile radius and the speed limit for cars is 25 miles/hour.
- b) All planes have the same capacity
- c) On average the number of passengers were the same for each day of the week
- d) The distances from Seattle to other airports, flight times, radius of area serviced by airport in each city, and the speed limit are shown in Table 2.

Write a program to determine the following:

- i) Average distance traveled by a passenger
- ii) Average time it takes a passenger to reach his/her destination assuming no delays.
- iii) Number of passengers arriving in Pullman.

Table 1: Number of flights

Day/City	NY	LAX	Spokane	Pullman	Chicago	Pheonix
Mon.	6	10	12	8	5	4
Tues.	8	7	13	10	4	3
Wed.	9	8	11	12	2	3
Thurs	4	10	6	9	8	8
Fri.	12	9	9	4	4	7
Sat.	10	12	8	5	6	4
Sun.	7	3	10	12	7	6

Table 2: Flight and Airport Information:

Airport/Info	Distance (miles)	Flight time (hours)	Radius of Area (miles)	Speed limit (mile/hour)
NY	3000	5	40	30
LAX	2000	3.5	60	35
Spokane	300	0.75	35	25
Pullman	400	1	20	25
Chicago	1500	3	60	30
Pheonix	2200	4	50	35