1) The millions of tourists visiting Spain in 2003, 2004 and 2005 according to their nationalities are given in the following table. Write a R code to solve the following.

Nationality	2003	2004	2005
Germany	9.303	9.536	9.918
France	7.959	7.736	8.875
Great Britain	15.224	15.629	16.090
USA	0.905	0.894	0.883
Rest of the world	17.463	18.635	20.148

   a)   Store the values in this table in a matrix with the name `tourists`.
   b)   Calculate the total of the rows and columns.
   c)   Calculate the mean of the rows and columns.

2) Consider the system of equations:
$$3x + 2y + z = 10, 2x - 3y + z = -1, x + y + z = 6$$
Write a R code to solve this system of equations.

3) Use different ways to enter the following data in R.

age	gender	weight
25	M	166
30	F	115
18	F	120

4) Enter the following data in R and store it with the name `leadership`.

Manager	Date	Country	Gender	Age	q1	q2	q3	q4	q5
1	10/24/08	US	M	32	5	4	5	5	5
2	10/28/08	US	F	45	3	5	2	5	5
3	10/1/08	UK	F	25	3	5	5	5	2
4	10/12/08	UK	M	39	3	3	4		
5	5/1/09	UK	F	99	2	2	1	2	1

5) This exercise involves the `Cars93` data set form the `MASS` library in `R`.

   a)   Construct a contingency table of `Origin` by `AirBags`.

   b)   Construct a three-way contingency table of `Origin` with respect to `AirBags` and `DriveTrain`.

   c)   Calculate the totals and proportions by rows and columns for each contingency tables.

6) Consider `College` data available in `ISLR2` library in `R`.

   a)   Obtain numerical summary of the variables in the data set.

   b)   Obtain scatterplot matrix of the first ten columns or variables of the data.

   c)   Obtain side-by-side boxplots of `Outstate` versus `Private`.

   d)   Create a new qualitative variable, called `Elite`, by binning the `Top10perc` variable. Divide the universities into two groups based on whether or not the proportion of students coming from the top 10 % of their high school classes exceeds 50%.