1. Use the "AirPassengers" dataset for the following

   i) Create dataframe with month name for the dataset as below

	Month	AirPassengers
1	January	112
2	February	118
3	March	132
4	April	129
5	May	121
6	June	135
7	July	148

wing 1 to 8 of 144 entries

[3]

   ii) Find the monthly average passengers for each months [3]

   iii) Plot the monthly variance for each month [2]

2. Create a vector having the following elements

2	3	-4	5	9	1	-3	2

   Compute $\log_2$ of all the elements of vec1. [1]

   Plot the result in y-axis and element values in the x-axis as point plot. The NaN produced should be replaced with 0 and appear as red in the plot. [3]

3. Import the dataset datafile.csv and find the following

   i. How many entries are present where husband's age is less than wife's age? [2]

   ii. Compute the total income as addition of husband's income and wife's income to find the households having total income more than 500000. Code should return corresponding household number. [2]

   iii. Create an additional column with the criterion as "Status" having values as
   Both husband and wife age more than 65: "Level 1"
   Husband greater than 65 but wife less than 65: "Level 2"
   Both Less than 65 but greater than equal to 55: "Level 3"
   Both less than 50: "Level 4"
   Also find how many household are there in each of the levels such that to create an external file (.csv) as

Status	Number of household
Level 1	-
Level 2	-
Level 3	-
Level 4	-