Lab Test 1 - (4) Matrices

Allocated Time - 30 mins

Submit your solution in an R file.

Create the following matrix (**temps**), which contains synthetic data for the average temperature for five successive days, in five different locations. Use **set.seed(100)**, and the function **rnorm(N,mean,sd)**. Generate the random numbers in five different calls, one for each day, with the following parameters for each call.

- Day 1, N = 5, mean = 5, sd = 2
- Day 2, N = 5, mean = 7, sd = 3
- Day 3, N = 5, mean = 12, sd = 4
- Day 4, N = 5, mean = 14, sd = 2
- Day 5, N = 5, mean = 10, sd = 3

The variable **temps** should have the following structure (you should add in the city names as row names for the matrix)

is.matrix(temps)

```
## [1] TRUE
```

temps

```
##               Day1      Day2      Day3     Day4      Day5
## Galway    3.995615 7.955890 12.35954 13.94137  8.685730
## Dublin    5.263062 5.254628 12.38510 13.22229 12.292182
## Cork      4.842166 9.143598 11.19346 15.02171 10.785884
## Limerick  6.773570 4.524222 14.95936 12.17237 12.320214
## Sligo     5.233943 5.920414 12.49352 18.62059  7.556863
```

Add the following column to **temps** that contains the maximum temperature over the five days for each of the five cities. Store the new information in the variable **temps_2**.

The following outputs should be obtained.

temps_2

```
##                 Day1      Day2     Day3     Day4       Day5 Max_Temp
## Galway     3.995615 7.955890 12.35954 13.94137  8.685730 13.94137
## Dublin     5.263062 5.254628 12.38510 13.22229 12.292182 13.22229
## Cork       4.842166 9.143598 11.19346 15.02171 10.785884 15.02171
## Limerick   6.773570 4.524222 14.95936 12.17237 12.320214 14.95936
## Sligo      5.233943 5.920414 12.49352 18.62059  7.556863 18.62059
```