**Day3 Questions**

**(Factor, List and Matrix)**

**Prepare a solution file Day3.R containing the solutions to the questions**

1. Create a List named student with the following data. Give the names Name, RollNo, Gender & Marks for the items
2. Name
3. Roll No
4. Gender
5. Marks for 5 subjects.

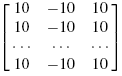
From the above list

1. Compute the average of marks
2. Store the Roll No and Marks to another list.
3. Modify the mark for the 5th subject as 100
4. Prepare a new vector with the names of the 5 subjects
5. Attach it as the last item in the list
6. Create a 2X2 matrix A with some sample data.
7. Calculate B= 2A
8. Create the matrix



a) Check that A3 = 0 where 0 is a 3 × 3 matrix with every entry equal to 0.

1. Create the following matrix B with 15 rows:



Calculate the 3 × 3 matrix BTB.

1. a) Create the following matrix

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | 4 | 7 | 10 | 13 |
| 2 | 5 | 8 | 11 | 14 |
| 3 | 6 | 9 | 12 | 15 |

b) Change the column names to "p1", "p2", "p3", "p4" and "p5" and the row names to "Alice", "Bill" and "Sara"

c) Calculate the mean for all columns

6) Prepare a factor variable named category, which stores the products categories.