Week-3

Task-1 Programs on Vectors and Lists

1. Write a R program to reverse the order of given vector.  
   2. Write a R program to concatenate a vector with other  
   3. Write a R program to count number of  values in a range in a given vector.

4. Write a R program to combines two given vectors

By row

By column

5. Write a R program to test whether the value of the element of a given vector greater

than 10 or not. Return TRUE or False  
6. Write a R program to create a list containing strings, numbers, vectors and a logical

values.  
7. Write a R program to create a list containing a vector, a matrix and a list and give

names to the elements in the list. Access the first and second element of the list.  
8. Write a R program to create a list containing a vector, a matrix and a list and add

element at the end of the list.  
9. Write a R program to select second element of a given nested list.

**Task:2 Programs on Arrays and Matrix**

1. Write a R program to create a matrix from a list of given vectors.
2. Write a R program to extract the submatrix whose rows have column value > 7 from a given matrix.
3. Write a R program to convert a matrix to a 1 dimensional array.
4. Write a R program to find row and column index of maximum and minimum value in a given matrix.
5. Write a R program to create an array of two 3x3 matrices each with 3 rows and 3 columns from two given two vectors.
6. Write a R program to create an 3 dimensional array of 24 elements using the dim() function.
7. Write a R program to create an array of two 3x3 matrices each with 3 rows and 3 columns from two given two vectors. Print the second row of the second matrix of the array and the element in the 3rd row and 3rd column of the 1st matrix.
8. Write a R program to combine three arrays so that the first row of the first array is followed by the first row of the second array and then first row of the third array.

**Task3: Programs on Data Frames**

1. Write a R program to create a data frame from four given vectors.
2. Write a R program to get the statistical summary and nature of the data of a given data frame.
3. Write a R program to extract specific column from a data frame using column name.
4. **.** Write a R program to extract 3rd and 5th rows with 1st and 3rd columns from a given data frame.
5. Write a R program to add new row(s) and new column to an existing data frame.