**Assessment No: 2**

**Data Manipulation Using R**

1. Create user defined functions to perform various arithmetic operations and call each functions using menu driven format (try functions with and without parameters, functions with default argument)
2. Familiarize basic statistical operation on a random vector of 100 elements
   1. Mean b. Median c. Mode d. Range
3. IQR f. Standard deviation g. Summary h. Histogram
   1. Table
4. Perform given operations on a data frame
   1. Create a data frame
   2. Access a component ([, [[, $)
   3. Structure of data frame
   4. Add new column
   5. Add new row
   6. Delete column
   7. Delete specific row
   8. Order data frame (with, order, arrange)
5. Read Air quality dataset and handle the missing data using following technique
   1. Drop Row
   2. Drop Column
   3. Imputation (Replace with unknown, mean or Group mean)
6. Perform Label encoding on IRIS Dataset
7. Perform One-hot encoding on Dataset
8. Feature scaling or standardization
   1. Normalization
   2. Z-scale