

**Practical 5Manual**

**Exercise 1**

Create a function that given a data frame and a vector, will add the vector (if the vector length match with the rows number of the data frame) as a new variable to the data frame.Create a student data frame with 10 roll numbers and 10 names, and two vectors with 10 marks and 8 marks , and test the function.

**Exercise 2**

Consider a data frame df:  
  
Id=c(1:10)  
Age=c(14,12,15,10,23,21,41,56,78,12)  
Sex=c('F','M','M','F','M','F','M','M','F','M')  
Code=letters[1:10]  
df=data.frame(Id,Age,Sex,Code)

Create a function that, given a data frame and two indexes, exchanges two values ​​of the Code variable with each other.For example, if the index is 1 and 3, then code of first row is swapped with code of 3rd row

**Exercise 3**

Consider two variables x,y and a data frame df:  
x,y integer

Create a function that given a data frame df calculate a new variable ‘SUM\_x\_y'(If x=2 and y=3, then the new variable will be ‘SUM\_2\_3’,  
if x=4 and y=10, then the new variable will be ‘SUM\_4\_10’),such that for each row ‘i’ is equal to:  
sum(x\*df[1:i,1])+sum(y\*df[1:i,2])

**Exercise 4**

Create a function to create an employee data frame (Name,Gender,Age,Designation, Department & SSN) and return the Name,Age & Designation of all employees

**Exercise 5**

Write a function to accept a dataframe and replace NA values of all numeric columns with mean of the column.