```
df <- read.csv("/home/arjunchauhan/Code/R-Programming/testfile3.csv")
df</pre>
```

```
Name Semester Subject.1.Marks Subject.2.Marks Subject.3.Marks
##
## 1
          John Doe
                           3
                                            77
                                                             67
                                                                               88
                           3
## 2
           Sam Ray
                                            66
                                                             88
                                                                               76
                           3
                                            54
                                                             99
## 3
          Roshan M
                                                                               80
      Rohit Mehta
                           3
                                            67
                                                             67
                                                                               79
## 4
## 5
      Andrew Dove
                           5
                                            78
                                                             89
                                                                               81
                           3
## 6
          Gary Sam
                                            89
                                                             56
                                                                               79
                           3
## 7
      Manohar Raj
                                            92
                                                             89
                                                                               90
                           5
## 8
      Krish Kumar
                                            78
                                                             87
                                                                               95
                           5
## 9
      Naren Singh
                                            81
                                                             78
                                                                               89
                           5
                                            65
                                                             79
                                                                               93
## 10 Jilshan Raj
      Subject.4. Marks Subject.5. Marks Active. Student Date. of. Birth
##
## 1
                     91
                                      86
                                                     TRUE
                                                             25-07-1990
                     89
                                                    TRUE
## 2
                                      91
                                                             15-07-1991
                     76
                                      81
## 3
                                                    TRUE
                                                             29-01-1990
## 4
                     98
                                      90
                                                    TRUE
                                                             25-07-1990
## 5
                     85
                                                    TRUE
                                      87
                                                             05-11-1990
## 6
                     82
                                      85
                                                    TRUE
                                                             25-07-1991
## 7
                     91
                                      96
                                                    TRUE
                                                             15-07-1990
                                      91
                                                   FALSE
## 8
                     86
                                                             18-02-1990
## 9
                     87
                                      90
                                                    TRUE
                                                             23-12-1990
## 10
                     86
                                      89
                                                   FALSE
                                                             14-07-1991
```

```
##
              Name Semester Subject.1.Marks Subject.2.Marks Subject.3.Marks
## 1
                                           77
          John Doe
                                                             67
## 2
           Sam Ray
                           3
                                           66
                                                             88
                                                                               76
                           3
## 3
         Roshan M
                                           54
                                                             99
                                                                               80
      Rohit Mehta
                           3
                                           67
                                                                               79
## 4
                                                             67
                           5
                                           78
## 5
      Andrew Dove
                                                             89
                                                                               81
                           3
                                                                               79
## 6
         Gary Sam
                                           89
                                                             56
## 7
                           3
                                           92
                                                             89
                                                                               90
      Manohar Raj
                           5
                                           78
                                                             87
                                                                               95
## 8
      Krish Kumar
                           5
      Naren Singh
                                                                               89
## 9
                                           81
                                                             78
                           5
## 10 Jilshan Raj
                                           65
                                                             79
                                                                               93
      Subject.4.Marks Subject.5.Marks Active.Student Date.of.Birth TotalMarks
##
                    91
                                      86
                                                    TRUE
                                                             25-07-1990
                                                                                 409
## 1
## 2
                     89
                                      91
                                                    TRUE
                                                             15-07-1991
                                                                                 410
## 3
                     76
                                      81
                                                    TRUE
                                                             29-01-1990
                                                                                 390
## 4
                    98
                                      90
                                                    TRUE
                                                             25-07-1990
                                                                                 401
## 5
                     85
                                                    TRUE
                                      87
                                                             05-11-1990
                                                                                 420
## 6
                     82
                                      85
                                                    TRUE
                                                             25-07-1991
                                                                                 391
## 7
                    91
                                      96
                                                    TRUE
                                                             15-07-1990
                                                                                 458
## 8
                    86
                                      91
                                                   FALSE
                                                             18-02-1990
                                                                                 437
## 9
                     87
                                      90
                                                    TRUE
                                                             23-12-1990
                                                                                 425
## 10
                     86
                                      89
                                                   FALSE
                                                             14-07-1991
                                                                                 412
```

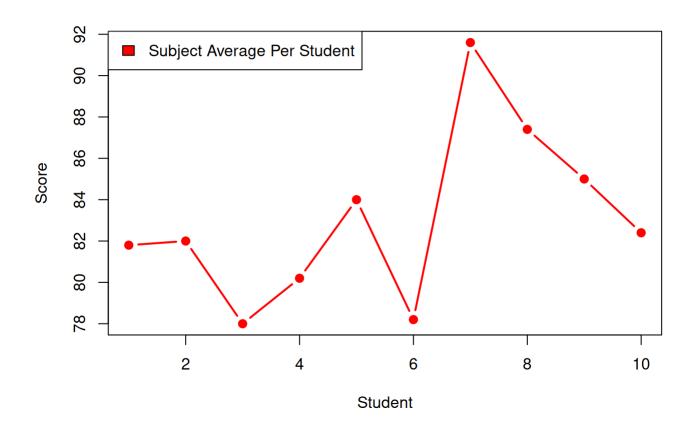
```
library(matrixStats)
avg_Marks <- rowMeans(dataF)
df$AvgMarks <- avg_Marks
row_median = rowMedians(as.matrix(dataF))
df$StudentScore_Median = row_median
avg_TotalMarks <- mean(df[,10])
avg_TotalMarks</pre>
```

## [1] 415.3

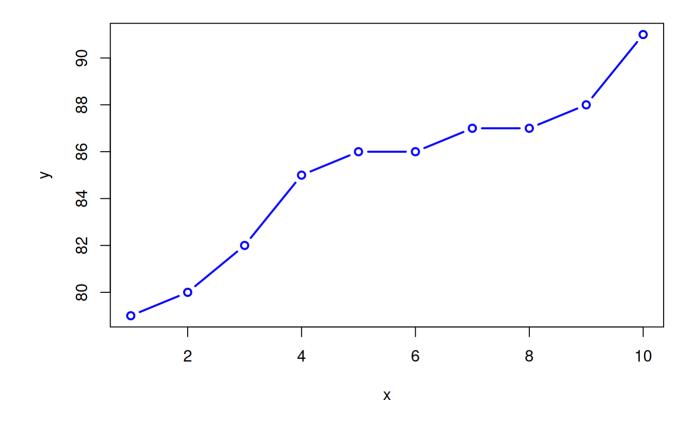
df

```
##
              Name Semester Subject.1.Marks Subject.2.Marks Subject.3.Marks
## 1
                                            77
          John Doe
                                                             67
## 2
           Sam Ray
                           3
                                            66
                                                             88
                                                                               76
## 3
          Roshan M
                           3
                                            54
                                                             99
                                                                               80
                           3
                                            67
                                                                               79
## 4
      Rohit Mehta
                                                             67
                           5
                                            78
## 5
      Andrew Dove
                                                             89
                                                                               81
                           3
                                                                               79
## 6
          Gary Sam
                                            89
                                                             56
                           3
                                            92
                                                             89
                                                                               90
## 7
      Manohar Raj
                           5
                                            78
                                                             87
                                                                               95
## 8
      Krish Kumar
                           5
## 9
      Naren Singh
                                            81
                                                             78
                                                                               89
                           5
## 10 Jilshan Raj
                                            65
                                                             79
                                                                               93
##
      Subject.4.Marks Subject.5.Marks Active.Student Date.of.Birth TotalMarks
                                                             25-07-1990
                                                                                 409
## 1
                     91
                                      86
                                                     TRUE
## 2
                     89
                                      91
                                                     TRUE
                                                             15-07-1991
                                                                                 410
## 3
                     76
                                      81
                                                     TRUE
                                                             29-01-1990
                                                                                 390
## 4
                     98
                                      90
                                                     TRUE
                                                             25-07-1990
                                                                                 401
## 5
                     85
                                      87
                                                     TRUE
                                                             05-11-1990
                                                                                 420
## 6
                     82
                                      85
                                                     TRUE
                                                             25-07-1991
                                                                                 391
## 7
                     91
                                      96
                                                     TRUE
                                                             15-07-1990
                                                                                 458
## 8
                     86
                                      91
                                                    FALSE
                                                             18-02-1990
                                                                                 437
## 9
                     87
                                      90
                                                     TRUE
                                                             23-12-1990
                                                                                 425
## 10
                     86
                                      89
                                                    FALSE
                                                             14-07-1991
                                                                                 412
##
      AvgMarks StudentScore_Median
## 1
           81.8
                                   86
## 2
           82.0
                                   88
## 3
           78.0
                                   80
           80.2
                                   79
## 4
## 5
           84.0
                                   85
           78.2
## 6
                                   82
## 7
           91.6
                                   91
## 8
           87.4
                                   87
## 9
           85.0
                                   87
           82.4
## 10
                                   86
```

```
x <- c(1:10)
plot(x, df$AvgMarks, type = "b", xlab = "Student", ylab = "Score", pch = 19, col = "Red"
, lwd= 2.0)
legend("topleft", legend=c("Subject Average Per Student"), fill = c("Red"))</pre>
```



```
df$StudentScore_Median = apply(df[,3:7],1, median, na.rm = TRUE)
y <- sort(df$StudentScore_Median, decreasing = FALSE)
plot(x, y, type = "b", pch = 21, col = "Blue", lwd = 2.0)</pre>
```



## df[which(df\$AvgMarks > 90), ]

```
Name Semester Subject.1.Marks Subject.2.Marks Subject.3.Marks
##
## 7 Manohar Raj
                                        92
                                                        89
     Subject.4.Marks Subject.5.Marks Active.Student Date.of.Birth TotalMarks
##
## 7
                  91
                                   96
                                                TRUE
                                                        15-07-1990
                                                                           458
     AvgMarks StudentScore_Median
##
## 7
         91.6
                               91
```

```
TempDf = subset(df, df$Date.of.Birth > "1-07-1990")
TempDf
```

```
##
              Name Semester Subject.1.Marks Subject.2.Marks Subject.3.Marks
## 1
          John Doe
                                           77
                                                             67
## 2
           Sam Ray
                           3
                                           66
                                                             88
                                                                              76
         Roshan M
                           3
                                           54
                                                             99
                                                                              80
## 3
      Rohit Mehta
                           3
                                           67
                                                                              79
## 4
                                                             67
                           3
                                                                              79
## 6
         Gary Sam
                                           89
                                                             56
                           3
## 7
      Manohar Raj
                                           92
                                                             89
                                                                              90
      Krish Kumar
                           5
                                           78
                                                                              95
## 8
                                                             87
                           5
                                                                              89
      Naren Singh
                                           81
                                                             78
## 9
                           5
                                                             79
## 10 Jilshan Raj
                                           65
                                                                              93
##
      Subject.4.Marks Subject.5.Marks Active.Student Date.of.Birth TotalMarks
## 1
                    91
                                      86
                                                    TRUE
                                                             25-07-1990
                                                                                 409
## 2
                    89
                                      91
                                                    TRUE
                                                             15-07-1991
                                                                                 410
## 3
                    76
                                      81
                                                    TRUE
                                                             29-01-1990
                                                                                390
## 4
                    98
                                      90
                                                    TRUE
                                                             25-07-1990
                                                                                 401
## 6
                    82
                                      85
                                                    TRUE
                                                             25-07-1991
                                                                                391
## 7
                    91
                                      96
                                                    TRUE
                                                             15-07-1990
                                                                                458
## 8
                    86
                                      91
                                                   FALSE
                                                             18-02-1990
                                                                                437
## 9
                    87
                                      90
                                                    TRUE
                                                             23-12-1990
                                                                                 425
## 10
                    86
                                      89
                                                   FALSE
                                                             14-07-1991
                                                                                 412
##
      AvgMarks StudentScore_Median
## 1
           81.8
                                   86
## 2
           82.0
                                   88
                                   80
## 3
           78.0
                                   79
## 4
           80.2
## 6
           78.2
                                   82
           91.6
                                   91
## 7
## 8
           87.4
                                   87
                                   87
## 9
           85.0
## 10
           82.4
                                   86
```

## IQR(df\$TotalMarks)

```
## [1] 20.75
```

```
sem3 <- subset(df , df$Semester == 3)
sem5 <- subset(df, df$Semester ==5)</pre>
```

```
avgMarks3 <- mean(sem3$AvgMarks)
avgMarks5 <- mean(sem5$AvgMarks)
avgMarks3</pre>
```

```
## [1] 81.96667
```

```
avgMarks5
```

```
## [1] 84.7
```

write.csv(df,"/home/arjunchauhan/Code/R-Programming/testfile.csv", row.names = FALSE)

df

##		Name	Semester	Subject.1.	Marks	Subject.2.	Marks Subject	.3.Marks
##	1	John Doe	3	J	77	•	67	88
##	2	Sam Ray	3		66		88	76
##	3	Roshan M	3		54		99	80
##	4	Rohit Mehta	3		67		67	79
##	5	Andrew Dove	5		78		89	81
##	6	Gary Sam	3		89		56	79
##	7	Manohar Raj	3		92		89	90
##	8	Krish Kumar	5		78		87	95
##	9	Naren Singh	5		81		78	89
##	10	Jilshan Raj	5		65		79	93
##		Subject.4.Ma	arks Subje	ect.5.Marks	Activ	e.Student	Date.of.Birth	TotalMarks
##	1		91	86		TRUE	25-07-1990	409
##	2		89	91		TRUE	15-07-1991	410
##	3		76	81		TRUE	29-01-1990	
##	4		98	90		TRUE	25-07-1990	401
##	5		85	87		TRUE	05-11-1990	420
##	6		82	85		TRUE	25-07-1991	391
##	7		91	96		TRUE	15-07-1990	
##	8		86	91		FALSE	18-02-1990	437
##			87	90		TRUE	23-12-1990	
	10		86	89		FALSE	14-07-1991	412
##		AvgMarks Stu	udentScore					
##		81.8		86				
##		82.0		88				
##		78.0		80				
##		80.2		79				
##		84.0		85				
##		78.2		82				
##		91.6		91				
##		87.4		87				
##		85.0		87				
##	10	82.4		86				