CSE3505_FDA_Lab_Exp_2

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Working with Vectors in R

1. Create vector 'class' to store the class names 'class1','class2',...,'class5'

```
class <- c("class1","class2","class3","class4","class5")
class
```

```
## [1] "class1" "class2" "class3" "class4" "class5"
```

2. Use assign() function to create a vector 'avg' to store the average marks.

```
avg <- c(0,0,0,0,0)
assign("avg", c(80, 90, 95, 50, 70))
avg
```

```
## [1] 80 90 95 50 70
```

3. Display the average mark of class2.

```
avg[2]
```

```
## [1] 90
```

4. Display all the average marks except class 2.

```
avg[c(TRUE,FALSE,TRUE,TRUE,TRUE)]
```

```
## [1] 80 95 50 70
```

5. Access the average mark of class4 by its name.

```
avg[match("class4",class)]
```

```
## [1] 50
```

6. Find the minimum average mark and print the class which scored it.

```
min(avg)
```

```
## [1] 50
```

```
class[which.min(avg)]
```

```
## [1] "class4"
```

7. Find the maximum average mark and print the class which scored it.

```
max(avg)
```

```
## [1] 95
```

```
class[which.max(avg)]
```

```
## [1] "class3"
```

8. Find the total of average marks scored by all classes.

```
sum(avg)
```

```
## [1] 385
```

9. Find the mean of the average marks scored by all classes.

```
mean(avg)
```

```
## [1] 77
```

10. Find the standard deviation of the average marks scored by all classes.

```
sd(avg)
```

```
## [1] 17.88854
```

11. Arrange the average marks in ascending order.

```
avg<-sort(avg)
avg
```

```
## [1] 50 70 80 90 95
```

12. Create a vector classes by repeat the vector class twice.

```
classes<-rep(class, times=2)
classes
```

```
##  [1] "class1" "class2" "class3" "class4" "class5" "class1" "class2" "class3"
##  [9] "class4" "class5"
```

13. Create a vector marks by repeating each average mark twice.

```
marks<-rep(avg, times=2)
marks
```

```
##  [1] 50 70 80 90 95 50 70 80 90 95
```

14. Create a vector 'report' by adding the vector 'avg' with a sequence of 10 to 1 and find its length.

```
report <- c(avg,10:1)
report
```

```
##  [1] 50 70 80 90 95 10  9  8  7  6  5  4  3  2  1
```

```
length(report)
```

```
## [1] 15
```

15. Identify the classes for which average marks>70.

```
for(a in avg){
  if (a>70) print(a)
}
```

```
## [1] 80
## [1] 90
## [1] 95
```