TMC 204
Statistical Data Analysis with R
Unit 4
Manipulating Objects Part 1

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Sorting and rearranging vectors contd…

rank()

This command is used to sort your data slightly different than order

> data3<-c(8,9,7,9,NA) > rank(data3) [1] 2.0 3.5 1.0 3.5 5.0 By using rank() The two values are third and fourth largest and they shared a rank of 3.5 NA will be taken a last because by default na.last=TRUE **You can alter way you tied the values**	> order(data3) [1] 3 1 2 4 5 You can see two values of 9, 2 and 4 It may be 4 or 2 but it choose the by default value

```
> data3
[1] 8 9 7 9 NA
```

```
> rank(data3,ties.method='first')
[1] 2 3 1 4 5
```

```
> rank(data3,ties.method='average')
[1] 2.0 3.5 1.0 3.5 5.0
```

```
> rank(data3,ties.method='max')
[1] 2 4 1 4 5
```

```
> rank(data3,ties.method='random',
na.last='keep')
[1] 2 3 1 4 NA
```

These are all non parametric Statistical routines

So that’s why rank() is used for non parametric statistical techniques

Returning logical values from a vector

Previously we have seen which() command is used to tell which item in a vector meet some criteria

```
> data1<-c(3,5,7,5,3,2,6,8,5,6,9)
> which(data1==6)
[1]  7 10
```

If you omit which and use directly == the result is different

```
> data1==6
 [1] FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE  TRUE
[11] FALSE
```

You will get logical answer values

Some more examples for returning logical vectors

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```
> data1>5
 [1] FALSE FALSE  TRUE FALSE FALSE FALSE  TRUE  TRUE FALSE  TRUE
[11]  TRUE
> data1<5
 [1]  TRUE FALSE FALSE FALSE  TRUE  TRUE FALSE FALSE FALSE FALSE
[11] FALSE
> data1>5 & data1<8
 [1] FALSE FALSE  TRUE FALSE FALSE FALSE  TRUE FALSE FALSE  TRUE
[11] FALSE
```

This can be also used in character vectors

Source: Beginning R Dr. Mark Gardener