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L37-38

MAT2001

Lab Assignment-01

Introduction to R Studio (Basic syntax and commands)

">" this symbol is called prompt

Arithmetic Operations:

Addition

```
> 12+12
[1] 24
```

Subtraction

```
> 12-12
[1] 0
```

Multiplication

```
> 12*12
[1] 144
```

Division

```
> 12/12
[1] 1
```

Exponent (2 ways)

```
> 12^12
[1] 8.9161e+12
> 12**12
[1] 8.9161e+12
```

Modulus

```
[1] 0.918  
> 12%%13  
[1] 12
```

Integer division

```
[1] 0  
> 12%/%13  
[1] 0
```

Some exceptions:

```
> 1/0  
[1] Inf
```

```
> Inf-Inf  
[1] NaN
```

```
> sqrt(-1)  
[1] NaN
```

```
> 1+sin(NA)  
[1] NA
```

Some more basic calculations

```
> 1+2*3  
[1] 7  
> 100+200+300  
[1] 600
```

Logical Operations:

```
> 2<3  
[1] TRUE  
> 3>2  
[1] TRUE  
> 2<=3  
[1] TRUE
```

Working with vectors

```
> x<-c(1:10)  
> x[(x>8)|(x<5)]  
[1] 1 2 3 4 9 10  
> 5*a  
[1] 55  
> u=c  
> u=c(10,20,30)  
> v=c(1,2,3,4,5,6,7,8,9)  
> u+v  
[1] 11 22 33 14 25 36 17 28 39  
> a=c(1,2,3)  
> 5*a  
[1] 5 10 15
```

```
> vec1=c(1,2,3,4,5,6)  
> sum(vec1)  
[1] 21  
> mean(vec1)  
[1] 3.5  
> median(vec1)  
[1] 3.5  
> sd(vec1)  
[1] 1.870829  
> sqrt(vec1)  
[1] 1.000000 1.414214 1.732051 2.000000 2.236068 2.449490  
> seq(1,10)
```

```
> seq(1,10,2)
[1] 1 3 5 7 9
> seq(1:10)
[1] 1 2 3 4 5 6 7 8 9 10
> seq(1,10,by=2)
[1] 1 3 5 7 9
> as.character(a)
[1] "1" "2" "3"
```

String operation

```
> paste("Hiii", "Preyash")
[1] "Hiii Preyash"
> fname="Prey"; lname="ash"
> paste(fname,lname)
[1] "Prey ash"
> paste(fname)
[1] "Prey"
```

Importing the CSV File.

Import Dataset

Name

Lab1

Encoding

Automatic

Heading

☐ Yes ☒ No

Row names

Automatic

Separator

Comma

Decimal

Period

Quote

Double quote (")

Comment

None

na.strings

NA

☐ Strings as factors

Input File

```
i>>?col1,col2,col3
12,32,29
11,12,3
24,1,54
```

Data Frame

V1	V2	V3
i>>?col1	col2	col3
12	32	29
11	12	3
24	1	54

Import

Cancel

Untitled1* × Lab1 ×

← → ↺ Filter

	V1	V2	V3
1	col1	col2	col3
2	12	32	29
3	11	12	3
4	24	1	54

Showing 1 to 4 of 4 entries, 3 total columns