UNIVERSIDAD DE EL SALVADOR
Facultad Multidisciplinaria de Occidente
Departamento de Matemáticas

Álvaro Eduardo Morales Linares

September 14, 2015

a) es mas liviano al cargar archivos tiene mas recursos complementarios a comparacion de spss y excel

b) version nueva available Here version anterior smooth sidewalk 3.1.3 version que esta por salir 3.2.2 fire safety c) disminuyen los dos ultimos dos numeros y el primer numero se mantiene

```
> #problema2
> C<-matrix(c(3,-1,3,4,1,5,2,1,3),nrow=3,ncol=3)
> C

     [,1] [,2] [,3]
[1,]    3    4    2
[2,]   -1    1    1
[3,]    3    5    3

> t(C)

     [,1] [,2] [,3]
[1,]    3   -1    3
[2,]    4    1    5
[3,]    2    1    3

> E<-matrix(c(2,-4,5,0,1,4,3,2,1),nrow=3,ncol=3)
> E

     [,1] [,2] [,3]
[1,]    2    0    3
[2,]   -4    1    2
[3,]    5    4    1

> t(E)

     [,1] [,2] [,3]
[1,]    2   -4    5
[2,]    0    1    4
[3,]    3    2    1

> F<-t(C)+t(E)
> F

     [,1] [,2] [,3]
[1,]    5   -5    8
[2,]    4    2    9
[3,]    5    3    4

> D<-t(E)+t(C)
> D
```

```
     [,1] [,2] [,3]
[1,]    5   -5    8
[2,]    4    2    9
[3,]    5    3    4
```

```
> A<-matrix(c(1,2,3,2,1,4),nrow=2,byrow=3)
> A
```

```
     [,1] [,2] [,3]
[1,]    1    2    3
[2,]    2    1    4
```

```
> B<-matrix(c(1,0,2,1,3,2),nrow=3,byrow=2)
> B
```

```
     [,1] [,2]
[1,]    1    0
[2,]    2    1
[3,]    3    2
```

```
> d<-matrix(c(3,-2,2,4),nrow=2,ncol=2)
> d
```

```
     [,1] [,2]
[1,]    3    2
[2,]   -2    4
```

```
> t(d)
```

```
     [,1] [,2]
[1,]    3   -2
[2,]    2    4
```

```
> x<-matrix(c(-4,5,2,3),nrow=2,ncol=2)
> x
```

```
     [,1] [,2]
[1,]   -4    2
[2,]    5    3
```

```
> t(x)
```

```
     [,1] [,2]
[1,]   -4    5
[2,]    2    3
```

```
> #problema3
> A<-matrix(c(2,3,4,3,3,2,2,5,4,1,6,4),nrow=3,byrow=4)
> A
```

```
     [,1] [,2] [,3] [,4]
[1,]    2    3    4    3
[2,]    3    2    2    5
[3,]    4    1    6    4
```

```
> B<-matrix(c(20,12,8,28,15,15,30,12,10,40,16,20),nrow=4,byrow=3)
> B
```

```
     [,1] [,2] [,3]
[1,]   20   12    8
[2,]   28   15   15
[3,]   30   12   10
[4,]   40   16   20
```

```
> P <- A %*% B
> P
```

```
     [,1] [,2] [,3]
[1,]  364  165  161
[2,]  376  170  174
[3,]  448  199  187
```

```
> #problema5
> url<-"http://www.jaredlander.com/data/Tomato%20First.csv"
> Tomate<-read.table(file=url,header=TRUE,sep=",")
> Tomate
```

```
   Round                   Tomato Price           Source Sweet Acid Color
1      1                Simpson SM  3.99      Whole Foods   2.8  2.8   3.7
2      1         Tuttorosso (blue)  2.99          Pioneer   3.3  2.8   3.4
3      1        Tuttorosso (green)  0.99          Pioneer   2.8  2.6   3.3
4      1            La Fede SM DOP  3.99        Shop Rite   2.6  2.8   3.0
5      2              Cento SM DOP  5.49       D Agostino   3.3  3.1   2.9
6      2             Cento Organic  4.99       D Agostino   3.2  2.9   2.9
7      2               La Valle SM  3.99        Shop Rite   2.6  2.8   3.6
8      2           La Valle SM DOP  3.99           Faicos   2.1  2.7   3.1
9      3   Stanislaus Alta Cucina  4.53 Restaurant Depot   3.4  3.3   4.1
10     3                     Ciao    NA            Other   2.6  2.9   3.4
11     3       Scotts Backyard SM  0.00       Home Grown   1.6  2.9   3.1
12     3 Di Casa Barone (organic) 12.80           Eataly   1.7  3.6   3.8
13     4          Trader Joes Plum  1.49      Trader Joes   3.4  3.3   4.0
14     4           365 Whole Foods  1.49      Whole Foods   2.8  2.7   3.4
15     4         Muir Glen Organic  3.19      Whole Foods   2.9  2.8   2.7
16     4         Bionature Organic  3.39      Whole Foods   2.4  3.3   3.4
   Texture Overall Avg.of.Totals Total.of.Avg
1      3.4     3.4          16.1         16.1
2      3.0     2.9          15.3         15.3
```

3	2.8	2.9	14.3	14.3
4	2.3	2.8	13.4	13.4
5	2.8	3.1	14.4	15.2
6	3.1	2.9	15.5	15.1
7	3.4	2.6	14.7	14.9
8	2.4	2.2	12.6	12.5
9	3.2	3.7	17.8	17.7
10	3.3	2.9	15.3	15.2
11	2.4	1.9	11.9	11.9
12	2.3	1.4	12.7	12.7
13	3.6	3.9	17.8	18.2
14	3.1	3.1	14.8	15.2
15	3.2	3.1	14.8	14.7
16	3.2	2.8	15.1	15.2