Lab01-22

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```
###LAB01####


v <- c(2,1,1,1)
b <- c(6,4)
A <- matrix(v, nrow = 2, byrow = TRUE)
A
```

```
##      [,1] [,2]
## [1,]    2    1
## [2,]    1    1
```

```
#Matrix singular?
if(det(A)!=0){
  solve(A,b)
}
```

```
## [1] 2 2
```

```
Ab <- cbind(A,b)
#write.table(Ab, "sistema") #Output
#read.table("sistema") ->Ab
#getwd()
#setwd("c:// ")
Ab
```

```
##          b
## [1,] 2 1 6
## [2,] 1 1 4
```

```
m<- nrow(Ab)
n<- ncol(Ab)-1
A<-as.matrix(Ab[ ,1:n])
b<-as.vector(Ab[, n+1])
#rango(A)= 2 = m < n = 4
#(buscamos soluciones cuyas variables desconocidas son 0)



A=rbind(c(2, 1, 1, 8, 6), c(1, 1, 2, 4, 2))
A
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    2    1    1    8    6
## [2,]    1    1    2    4    2
```

```
M<- A[ , 1:2]
x<-solve(M,b)
x
```

```
## [1] 2 2
```

```
sol<-rep(0,n)
sol[1:2] -> x

j <- c(3,4)
sol[j]<- solve(M,b)

J<-rbind(c(1,2),c(1,3), c(1,4), c(2,3), c(2,4), c(3,4))
J
```

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

```
for(j in 1:6){
  aux<-J[j]
  M<- A[,aux]
}
M
```

```
## [1] 1 2
```