Assignment 2

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9/23/2022

```
library(lpSolve)
```

```
#Here we use the Objective function  to maximize

f.obj <- c(420,360,300,
           420,360,300,
           420,360,300)
```

```
#Constraints are defined here
f.con <- matrix(c(1,1,1,0,0,0,0,0,0,
                  0,0,0,1,1,1,0,0,0,
                  0,0,0,0,0,0,1,1,1,
                  20,15,12,0,0,0,0,0,0,
                  0,0,0,20,15,12,0,0,0,
                  0,0,0,0,0,0,20,15,12,
                  1,0,0,1,0,0,1,0,0,
                  0,1,0,0,1,0,0,1,0,
                  0,0,1,0,0,1,0,0,1), nrow = 9,byrow = TRUE)
```

```
#Set direction of the inequalities(as no.of rows = 9, we have set nine inequalities)
f.dir <- c("<=",
           "<=",
           "<=",
           "<=",
           "<=",
           "<=",
           "<=",
           "<=",
           "<=")
```

```
#Set the right hand side coefficients
#A. All the three plants have the excess capacity to produce 750,900 and 450 units per day
#B. All the three plants have 13000,12000 and 5000 square feet
#C. Sales forecast indicate that 900, 1200 and 750 unites would be sold per day by all the three plants
f.rhs<-c(750,
         900,
         450,
         13000,
         12000,
         5000,
         900,
```

```
        1200,
        750)
```

```
#Find the value of the objective function
lp("max",f.obj,f.con,f.dir,f.rhs)
```

```
## Success: the objective function is 708000
```