

# ASSIGNMENT 6

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```
library(lpSolve)
library(lpSolveAPI)
A <- read.lp("C://Users//heere//OneDrive//Documents//QMM//ASSIGNMENT 6//ap.lp")
A
```

```
## Model name:
##      x1    x2    x3    x4    x5    x6    x7
## Minimize  775  800  800  800  800  775  750
## Sunday    0    1    1    1    1    1    0 >= 18
## Monday    0    0    1    1    1    1    1 >= 27
## Tuesday    1    0    0    1    1    1    1 >= 22
## Wednesday  1    1    0    0    1    1    1 >= 26
## Thursday  1    1    1    0    0    1    1 >= 25
## Friday    1    1    1    1    0    0    1 >= 21
## Saturday  1    1    1    1    1    0    0 >= 19
## Kind      Std Std Std Std Std Std Std
## Type      Int Int Int Int Int Int Int
## Upper     Inf Inf Inf Inf Inf Inf Inf
## Lower      0   0   0   0   0   0   0
```

```
solve(A)
```

```
## [1] 0
```

```
get.objective(A)
```

```
## [1] 25675
```

```
#The $25,675 minimum wage expense comes to a total.
```

```
get.variables(A)
```

```
## [1] 2 4 5 0 8 1 13
```

```
tableno21 <- matrix(c(0,4,5,0,8,1,0,0,0,5,0,8,1,13,2,0,0,0,8,1,13,2,4,0,0,8,1,13,2,4,5,0,0,1,13,2,3,4,0,
colnames(tableno21)<- c('Sun/Mon', 'Mon/Tue','Tue/Wed', 'Wed/Thur', 'Thur/Fri', 'Fri/Sat', 'Sat/Sun')
row.names(tableno21) <- c('Sunday', 'Monday', 'Tuesday','Wednesda','Thursday','Friday','Saturday')
tableno21
```

##	Sun/Mon	Mon/Tue	Tue/Wed	Wed/Thur	Thur/Fri	Fri/Sat	Sat/Sun
## Sunday	0	4	5	0	8	1	0
## Monday	0	0	5	0	8	1	13
## Tuesday	2	0	0	0	8	1	13
## Wednesday	2	4	0	0	8	1	13
## Thursday	2	4	5	0	0	1	13
## Friday	2	3	4	0	0	0	13
## Saturday	2	4	5	0	8	0	0

*#I entered the lp model variables into the schedule to determine the best option that reduces the overa*

```
rowSums(tableno21)
```

##	Sunday	Monday	Tuesday	Wednesda	Thursday	Friday	Saturday
##	18	27	24	28	25	22	19

*#This chart displays the amount of employees who are available each day based on the shift arrangement*