QMM Assignment 3

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22/10/2021

.libPaths("C:\Users\Ananth\OneDrive\Desktop\MSBA Kent\Fall 2021\Fundamentals of Machine Learning\Assignment\Ass 2")

library(lpSolveAPI)

```
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```

```
## Warning: package 'lpSolveAPI' was built under R version 4.0.3
```

```
Solution <- read.lp("Question1.lp")
Solution
```

```
## Model name:
##            X11   X12   X13   X21   X22   X23
## Minimize   622   614   630   641   645   649
## R1           1     0     0     1     0     0  >=   80
## R2           0     1     0     0     1     0  >=   60
## R3           0     0     1     0     0     1  >=   70
## R4           1     1     1     0     0     0  <=  100
## R5           0     0     0     1     1     1  <=  120
## Kind       Std   Std   Std   Std   Std   Std
## Type      Real  Real  Real  Real  Real  Real
## Upper      Inf   Inf   Inf   Inf   Inf   Inf
## Lower        0     0     0     0     0     0
```

```
solve(Solution)
```

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

```
get.objective(Solution)
```

```
## [1] 132790
```

```
get.variables(Solution)
```

```
## [1]  0 60 40 80  0 30
```

```r
get.constraints(Solution)
```

```
## [1]  80  60  70 100 110
```

```r
FD12 <- read.lp("Question2.lp")


solve(FD12)
```

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

```r
get.objective(FD12)
```

```
## [1] 1943.22
```

```r
get.variables(FD12)
```

```
##  [1]  91   0   2   0   0  88   0   0  95   0   0   0  91   0  30  57  48   0  48
## [20]   0   0   0   0   0   0   2   0 185   0   0   0   0   0
```

```r
get.constraints(FD12)
```

```
##  [1] 93 88 95 30 57 48 91 48  2  0  0  0
```