zchu_Final_Project

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11/30/2019

Load lpSolveAPI library, then read in .lp file.

```
library(lpSolveAPI)
x <- read.lp("OptimalMix.lp")
```

Solve the LP problem.

```
solve(x)
```

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

```
get.objective(x)
```

```
## [1] 365698.7
```

```
get.variables(x)
```

```
## [1] 15886 23916 13319 25667 12864
```

Get shadow prices

```
get.sensitivity.rhs(x)
```

```
## $duals
##  [1] 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.22 3.62 3.43 3.10 6.75
##
## $dualsfrom
##  [1] -1e+30 -1e+30 -1e+30 -1e+30 -1e+30 -1e+30 -1e+30 -1e+30 -1e+30 -1e+30
## [11] -1e+30 -1e+30
##
## $dualstill
##  [1] 1.000000e+30 1.000000e+30 1.000000e+30 1.000000e+30 1.000000e+30
##  [6] 1.000000e+30 1.000000e+30 5.194140e+04 1.075645e+05 7.970672e+04
## [11] 1.259921e+05 6.862969e+04
```

Get reduced cost

```
get.sensitivity.obj(x)
```

```
## $objfrom
## [1] 0 0 0 0 0
##
## $objtill
## [1] 1e+30 1e+30 1e+30 1e+30 1e+30
```