Introduction

```
using JuMP; using Clp;

using GLPKMathProgInterface
```

Example Solver

$$min \sum_{(i,j)} c_{ij} xij$$

subject to

$$\sum_{i,j \in A} x_{ij} - \sum_{(j,i) \in A} x_{ij} = b_i \ \forall_i \in N$$

$$0 \le x_{ij} \le 1 \ \forall(i,j) \in A$$

```
model = Model(Clp.Optimizer)

@variable(model, 0 <= x <= 40)
@variable(model, y <= 0)
@variable(model, z <= 0)

@objective(model, Max, x + y + z)

@constraint(model, const1, -x + y + z <= 20)
@constraint(model, const2, x + 3y + z <= 30)

display(model)

optimize!(model)

results = [JuMP.value(x), JuMP.value(y), JuMP.value(z) ]

display(results)
```