Pedigree Package

Rohan L. Fernando

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Install PedModule

Do this only once

In [1]:
```
Pkg.clone("https://github.com/reworkhow/PedModule.jl.git")
```

```
INFO: Cloning PedModule from https://github.com/reworkhow/PedModule.jl.git
INFO: Computing changes...
```

In [2]:
```
using PedModule
```

In [3]:
```
;cat pedFile
```

```
1 0 0
2 0 0
3 0 0
4 1 2
5 1 2
6 1 3
```

In [4]:
```
ped = PedModule.mkPed("pedFile")
ped.idMap
```

Out[4]:
```
Dict{Any,Any} with 6 entries:
  "4" => PedNode(3,"1","2",0.0)
  "1" => PedNode(1,"0","0",0.0)
  "5" => PedNode(4,"1","2",0.0)
  "2" => PedNode(2,"0","0",0.0)
  "6" => PedNode(6,"1","3",0.0)
  "3" => PedNode(5,"0","0",0.0)
```

In [5]:
```
Ai = PedModule.AInverse(ped)
```

Out[5]:
```
6x6 sparse matrix with 22 Float64 entries:
        [1, 1]  =  2.5
        [2, 1]  =  1.0
        [3, 1]  =  -1.0
        [4, 1]  =  -1.0
        [5, 1]  =  0.5
        [6, 1]  =  -1.0
        [1, 2]  =  1.0
        [2, 2]  =  2.0
        [3, 2]  =  -1.0
        [4, 2]  =  -1.0
        ⋮
        [2, 3]  =  -1.0
        [3, 3]  =  2.0
        [1, 4]  =  -1.0
        [2, 4]  =  -1.0
        [4, 4]  =  2.0
        [1, 5]  =  0.5
        [5, 5]  =  1.5
        [6, 5]  =  -1.0
        [1, 6]  =  -1.0
        [5, 6]  =  -1.0
        [6, 6]  =  2.0
```

In [6]:
```
full(Ai)
```

Out[6]:
```
6x6 Array{Float64,2}:
  2.5   1.0  -1.0  -1.0   0.5  -1.0
  1.0   2.0  -1.0  -1.0   0.0   0.0
 -1.0  -1.0   2.0   0.0   0.0   0.0
 -1.0  -1.0   0.0   2.0   0.0   0.0
  0.5   0.0   0.0   0.0   1.5  -1.0
 -1.0   0.0   0.0   0.0  -1.0   2.0
```

In [7]:
```
A = round(inv(full(Ai)),2)
```

Out[7]:
```
6x6 Array{Float64,2}:
 1.0  0.0  0.5   0.5    0.0   0.5
 0.0  1.0  0.5   0.5   -0.0  -0.0
 0.5  0.5  1.0   0.5    0.0   0.25
 0.5  0.5  0.5   1.0    0.0   0.25
 0.0  0.0  0.0   0.0    1.0   0.5
 0.5  0.0  0.25  0.25   0.5   1.0
```