Test payoff.R function

Test functions in payoff.R file

filename <- temp.dat

DistanceMatrices

```
## $`1`
## $`1`$`1`
##
## 1 11.216277 21.87479 22.79591 17.98146  5.689902
## 2  8.597933 16.04583 10.65558 18.33189 23.568956
##
##
## $`2`
## $`2`$`10`
##
## 1 17.45855 10.21578 11.54487  6.665675 18.941232
## 2 14.61055 22.82317 16.45863  8.208943  9.798925
## 3 13.77362 10.69686 17.87504  7.869892 24.132068
## 4 10.97862 16.17907 17.62585 21.701774  8.427784
##
##
## $`3`
## $`3`$`10`
##
## 1 20.84234 16.09967 19.938828  8.858190 14.27746
## 2 10.84609 24.64220  9.911451  9.258366 18.37088
## 3 16.34561 24.95926 21.089669 16.228337 24.83296
```

Test function Cx(n)

```
Cx(0)
```

```
## NULL
```

```
Cx(1)
```

```
## [1] "x1"
```

```
Cx(10)
```

```
##  [1] "x1"  "x2"  "x3"  "x4"  "x5"  "x6"  "x7"  "x8"  "x9"  "x10"
```

Test function payoffDM(Cx,distanceMatrices,noAttr,m,i,j)

```
Cx<-Cx(noAttr)
payoffDM(Cx,distanceMatrices,noAttr,1,1,1)
```

```
## expression(21.8747893566063 * x1 + 22.795905838145 * x2 + 17.9814625597076 *
```

```
##     x3 + 5.6899020898701 * x4 + 11.21627705)
```

```
payoffDM(Cx,distanceMatrices,noAttr,2,1,2)
```

```
## expression(22.8231716640474 * x1 + 16.4586270777432 * x2 + 8.20894327799575 *
##     x3 + 9.79892549752311 * x4 + 14.61055148)
```

Test function CpayoffMatrix(noM,noU,noD,Cx,distanceMatrices,noAttr)

```
CpayoffMatrix(noM,noU,noD,Cx,distanceMatrices,noAttr)
```

```
## [[1]]
## [[1]][[1]]
## [[1]][[1]][[1]]
## expression(21.8747893566063 * x1 + 22.795905838145 * x2 + 17.9814625597076 *
##     x3 + 5.6899020898701 * x4 + 11.21627705)
##
## [[1]][[1]][[2]]
## expression(16.0458255057169 * x1 + 10.6555839592819 * x2 + 18.3318879727136 *
##     x3 + 23.5689562802085 * x4 + 8.5979330497)
##
##
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]][[1]]
## expression(10.215782009306 * x1 + 11.5448726677228 * x2 + 6.66567522130858 *
##     x3 + 18.9412317783658 * x4 + 17.45854728)
##
## [[2]][[1]][[2]]
## expression(22.8231716640474 * x1 + 16.4586270777432 * x2 + 8.20894327799575 *
##     x3 + 9.79892549752311 * x4 + 14.61055148)
##
## [[2]][[1]][[3]]
## expression(10.6968559173428 * x1 + 17.8750393186981 * x2 + 7.86989207952445 *
##     x3 + 24.1320683139937 * x4 + 13.77361667)
##
## [[2]][[1]][[4]]
## expression(16.1790665209139 * x1 + 17.6258549408472 * x2 + 21.7017735256739 *
##     x3 + 8.42778391085661 * x4 + 10.9786197557)
##
##
##
## [[3]]
## [[3]][[1]]
## [[3]][[1]][[1]]
## expression(16.0996670787094 * x1 + 19.9388277631915 * x2 + 8.85818983658442 *
##     x3 + 14.2774583577917 * x4 + 20.84233867)
##
## [[3]][[1]][[2]]
## expression(24.6421975914398 * x1 + 9.91145105353612 * x2 + 9.25836575277227 *
##     x3 + 18.3708754630047 * x4 + 10.8460939685)
##
## [[3]][[1]][[3]]
```

```
## expression(24.9592634391802 * x1 + 21.0896688118442 * x2 + 16.2283368043038 *
##     x3 + 24.8329578995369 * x4 + 16.34560669)
```

Test function assignpayoffMatrix(payoffMatrix,xval)

```
payoffMatrix <- CpayoffMatrix(noM,noU,noD,Cx,distanceMatrices,noAttr)
xval<-c(1,2,2,1)
assignpayoffMatrix(payoffMatrix,xval)
```

```
## [[1]]
## [[1]][[1]]
## [[1]][[1]][[1]]
## [1] 120.3357
##
## [[1]][[1]][[2]]
## [1] 106.1877
##
##
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]][[1]]
## [1] 83.03666
##
## [[2]][[1]][[2]]
## [1] 96.56779
##
## [[2]][[1]][[3]]
## [1] 100.0924
##
## [[2]][[1]][[4]]
## [1] 114.2407
##
##
##
## [[3]]
## [[3]][[1]]
## [[3]][[1]][[1]]
## [1] 108.8135
##
## [[3]][[1]][[2]]
## [1] 92.1988
##
## [[3]][[1]][[3]]
## [1] 140.7738
```

```
payoffMatrix <- CpayoffMatrix(noM,noU,noD,Cx,distanceMatrices,noAttr)
xval<-c(0,0,0,1)
assignpayoffMatrix(payoffMatrix,xval)
```

```
## [[1]]
## [[1]][[1]]
## [[1]][[1]][[1]]
## [1] 16.90618
```

```
##
## [[1]][[1]][[2]]
## [1] 32.16689
##
##
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]][[1]]
## [1] 36.39978
##
## [[2]][[1]][[2]]
## [1] 24.40948
##
## [[2]][[1]][[3]]
## [1] 37.90568
##
## [[2]][[1]][[4]]
## [1] 19.4064
##
##
##
## [[3]]
## [[3]][[1]]
## [[3]][[1]][[1]]
## [1] 35.1198
##
## [[3]][[1]][[2]]
## [1] 29.21697
##
## [[3]][[1]][[3]]
## [1] 41.17856
```