R Notebook

Without Mixtures

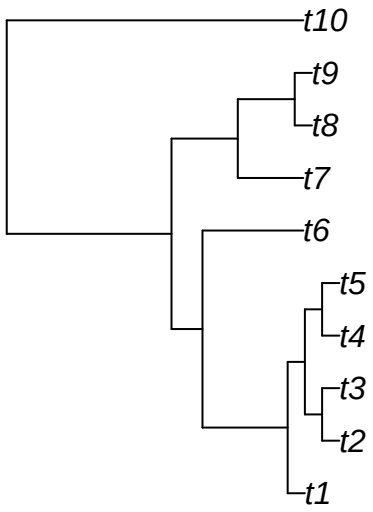
We first load the ClaritySim and Clarity package and simulate some appropriate data:

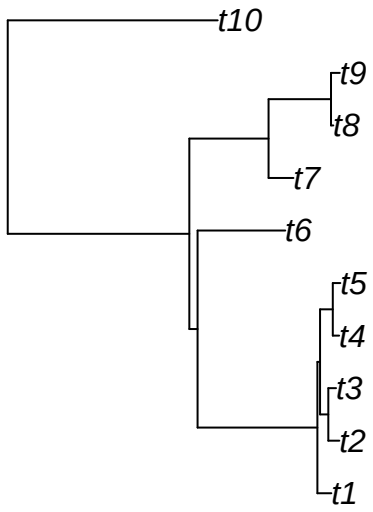
```
library(ClaritySim)
library(Clarity)
set.seed(1)
n=100
k=10
original <- simulateCoalescent(n,k,
                           sigma0=0.0001,
                           Amodel="uniform",
                           alpha=0,
                           minedge=0.1) # Simlulate 100 objects in a 10 dimensional latent space

similar <- transformCoalescent(original)
```

We can now visualise the trees from these 3 different simulated data:

```
par(mfrow = c(1,2))
plot(original$tree)
plot(similar$tree)
```





We now obtain the similarity matrices for the feature matrices of all 3 of these datasets:

```
original_dist <- original$Y

similar_dist <- similar$Y
```

With Mixtures

```
mixture <- mixCoalescent(original)

mixture_dist <- mixture$Y
```