```
# X is the data matrix
# C is cluster centers from
# the previous iteration.
kmeans <- function(X, C)
{
  # Compute pair-wise distance
  # between a data point and
  # a center.
  D<-inner.prod(X,t(C),
        "euclidean","+")
  # Find the closest center
  # to a data point.
  I<-agg.row(D,"which.min")
  # Count the number of data
  # points in each cluster.
  one<-rep.int(1,nrow(I))
  CNT<-groupby.row(one,I,"+")
  # Compute new centers.
  C<-groupby.row(X,I,"+")
  C<-mapply.row(C,CNT,"/")
  list(C=C,I=I)
}
```