MatrixNorm

Matrix Norms With MapReduce

In examples package of Hama, we have introduced MapReduce-based computing methods for matrix norms.

- Maximum absolute column sum
- The root of sum of the sum of squares
- The maximum absolute row sum
- Largest entry in absolute value

Here's the example one of them. Matrix.Norm.One is that find the maximum absolute row sum of matrix.

```
                                      j=n
The maximum absolute row sum =   max   ( sum | a_{i,j} | )
                               1<=i<=n   j=1


- A map task receives a row n as a key, and vector of each row as its value
  - emit (row, the sum of the absolute value of each entries)
- Reduce task select the maximum one
```

Matrix.infinity, Matrix.Maxvalue and Matrix.Frobenius are almost same with this.