# Visualization of tagged data

The report contains the following visualizations.

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The objects are:

```
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
objects <- levels(longdat(a)[,1])
objects
```

```
## [1] "cat"      "dog"      "monkey"   "bear"     "fish"     "tiger"
## [7] "elephant"
```

The tags are:

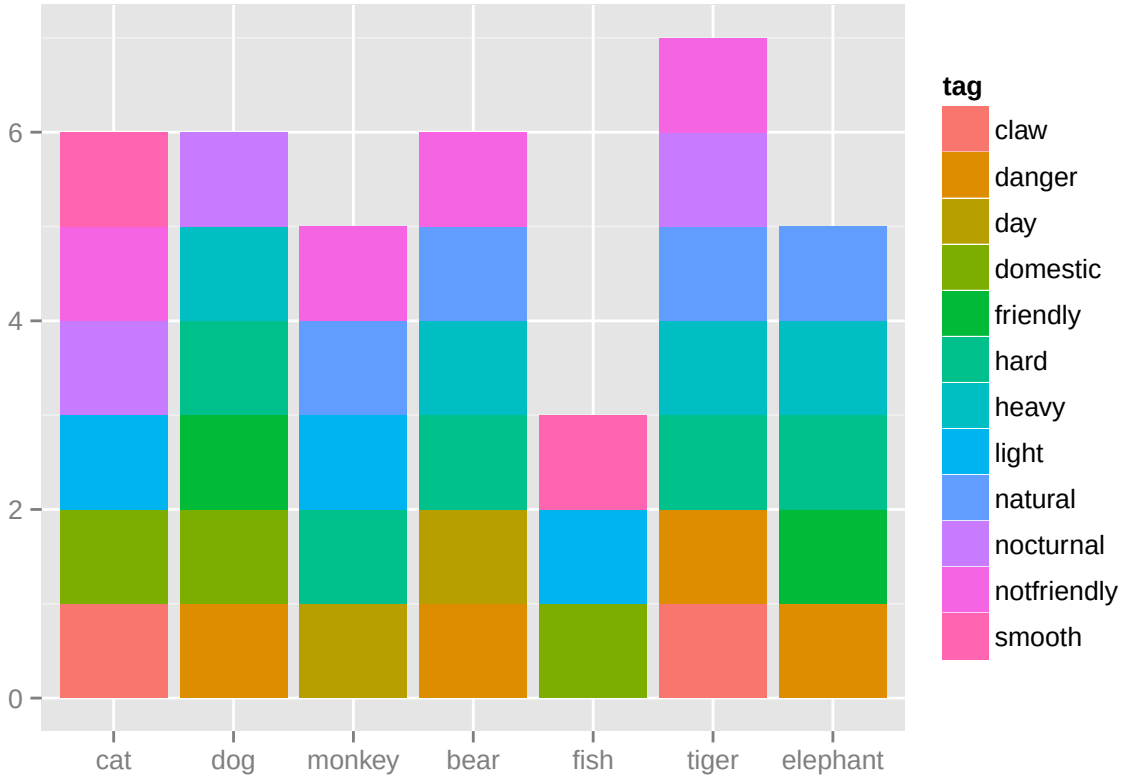
```
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
tags <- levels(longdat(a)[,2])
tags <- subset(tags,tags!="")
tags
```

```
##  [1] "claw"        "danger"      "day"         "domestic"    "friendly"
##  [6] "hard"        "heavy"       "light"       "natural"     "nocturnal"
## [11] "notfriendly" "smooth"
```

## Visualizing objects versus tags

---

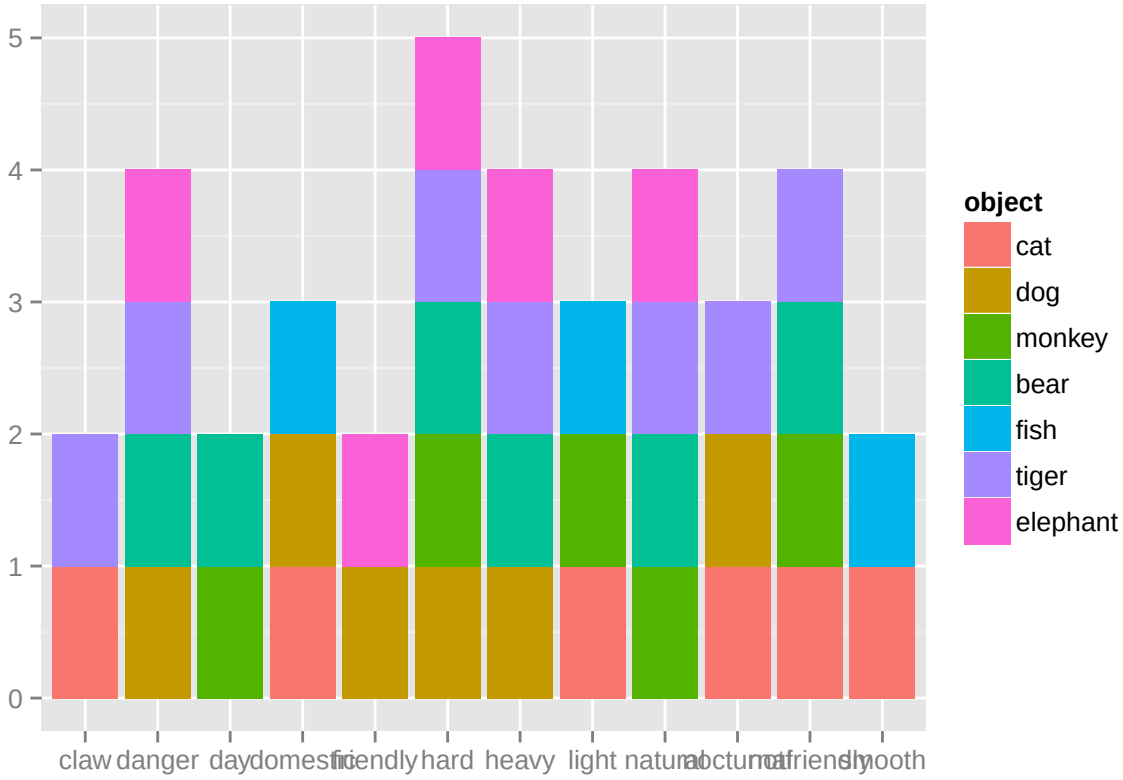
```
suppressMessages(require(ggplot2))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
qplot(object,fill=tag,data=longdat(a),xlab="",ylab="")
```



## Visualizing tags versus objects

---

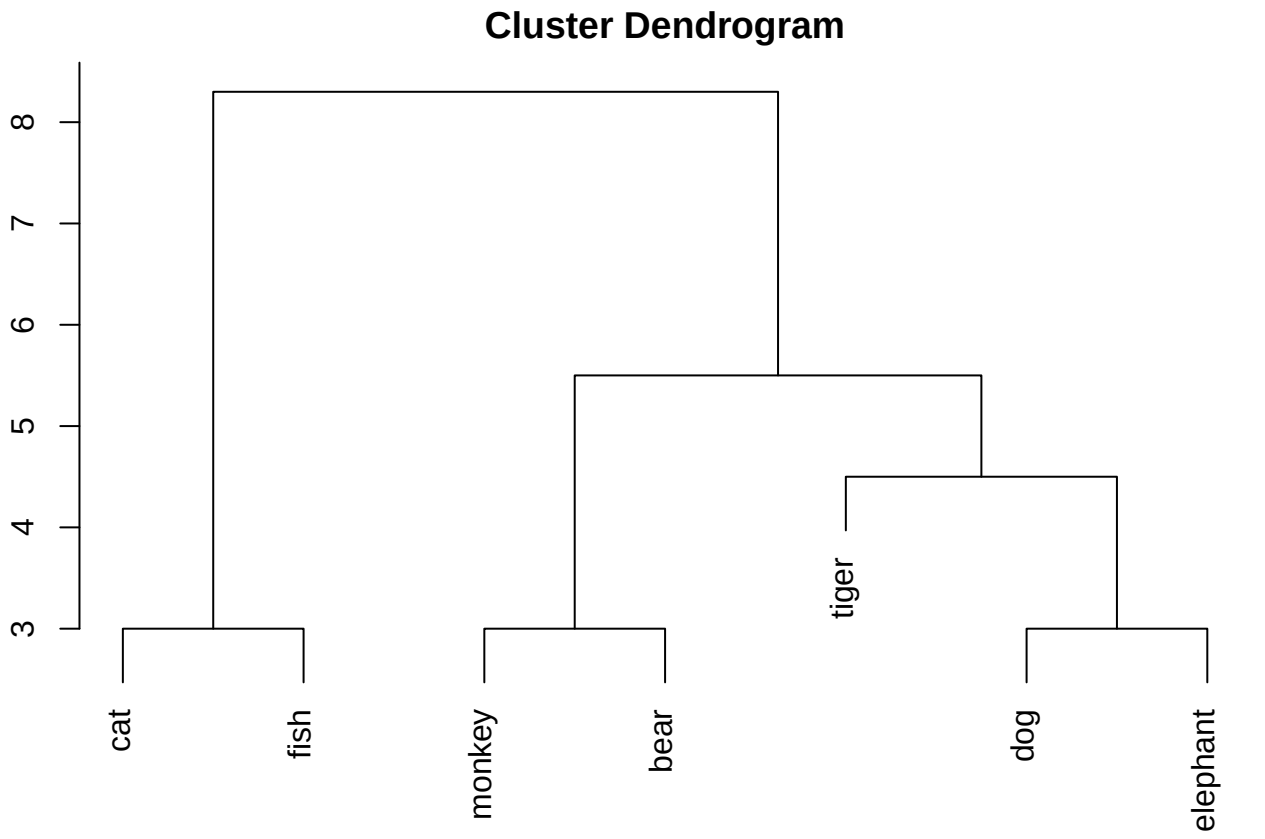
```
suppressMessages(require(ggplot2))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
qplot(tag,fill=object,data=longdat(a,toclassify="tag"),xlab="",ylab="")
```



### Hierarchical object clustering

---

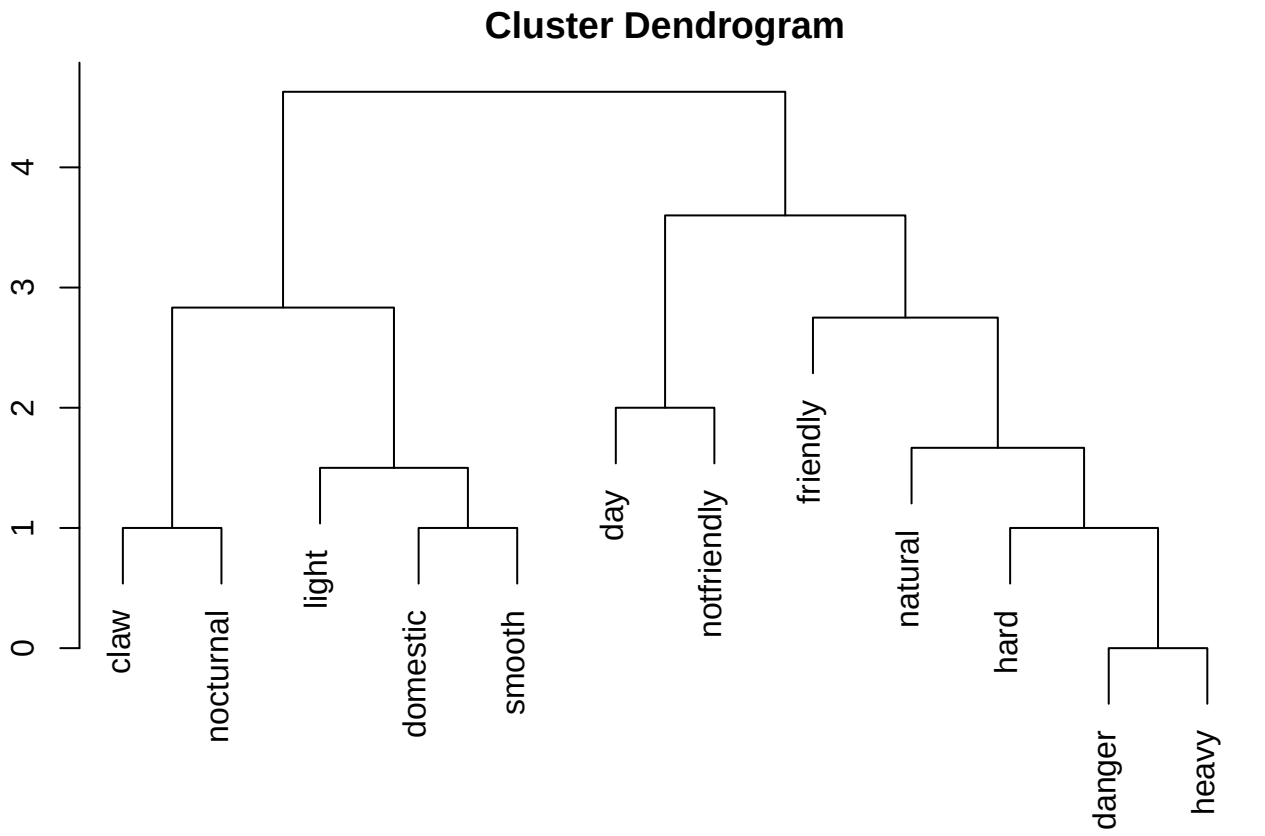
```
suppressMessages(require(dplyr))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
a %>% longdat %>% incdat %>% hcluster
```



### Hierarchical tag clustering

---

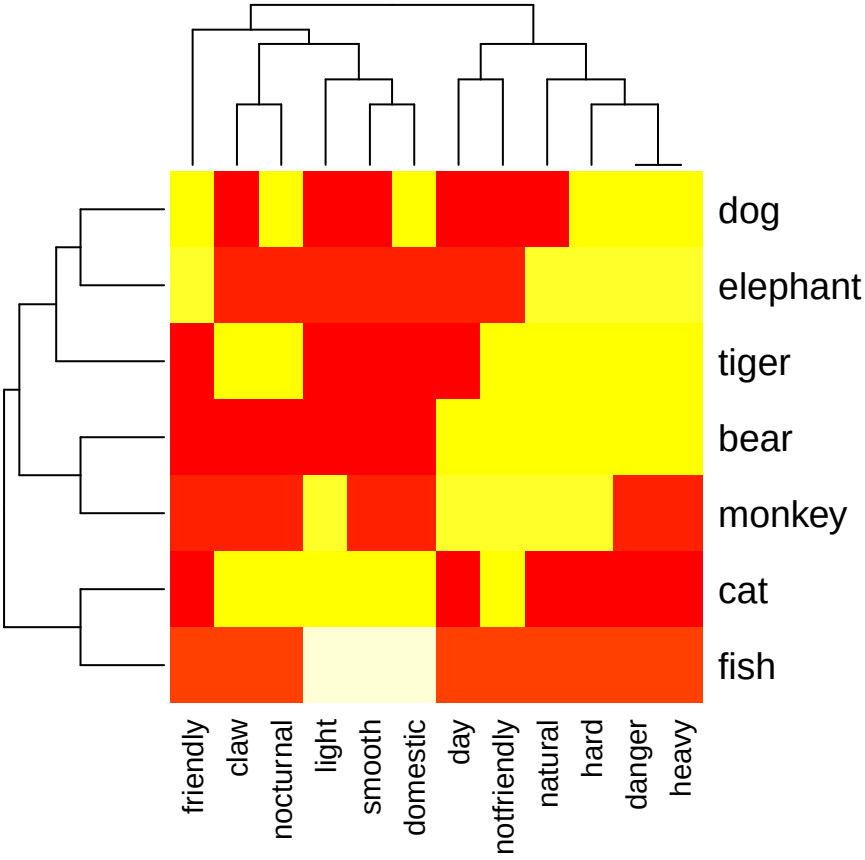
```
suppressMessages(require(dplyr))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
hcluster(incdat(longdat(a),toclassify="tag"))
```



### Heatmap of objectwise hierarchial clustering

---

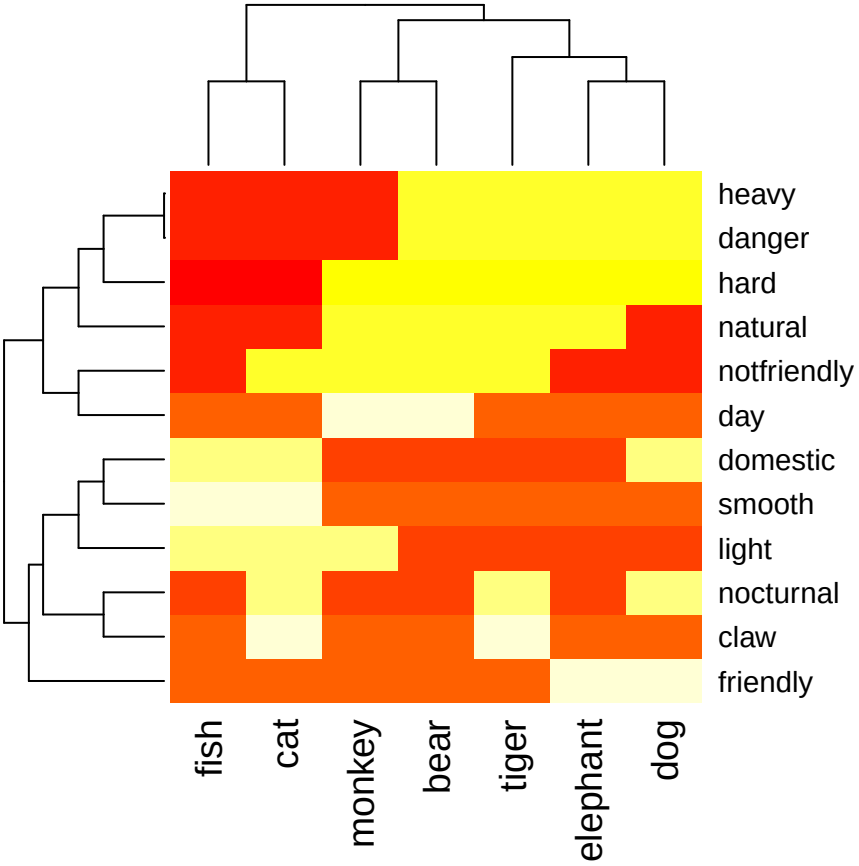
```
suppressMessages(require(dplyr))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
a %>% longdat %>% incdat %>% hclusterhm
```



### Heatmap of tagwise hierarchial clustering

---

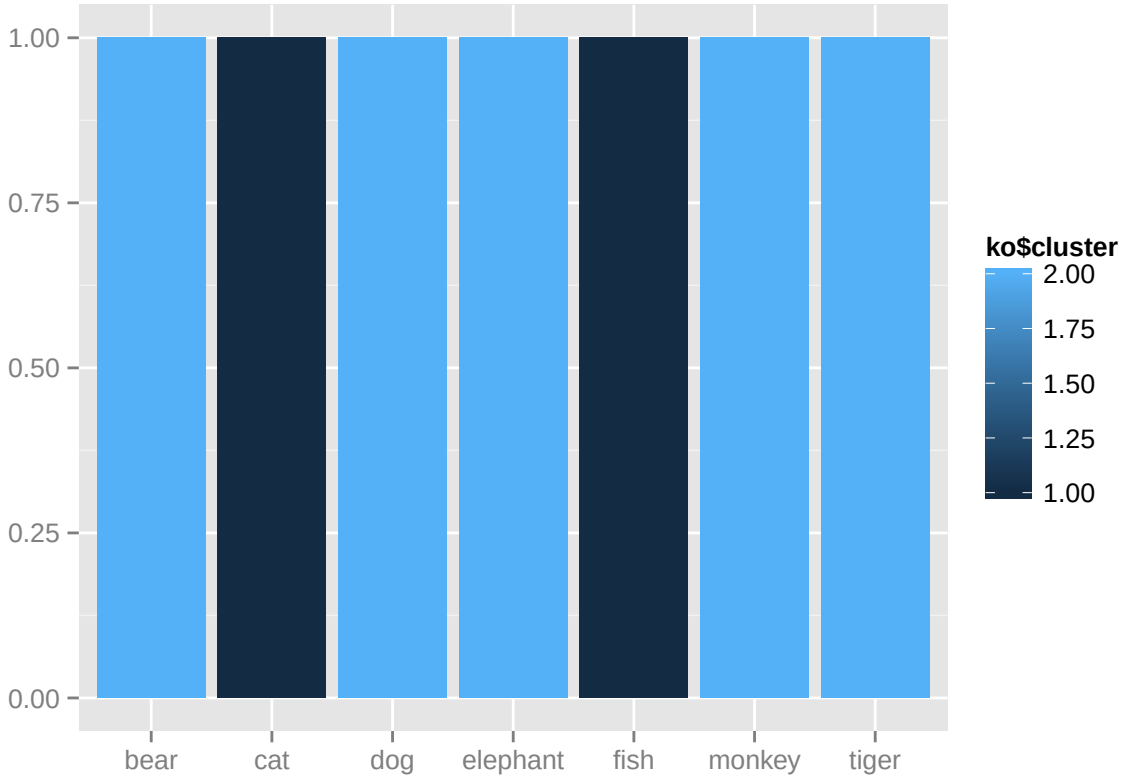
```
suppressMessages(require(dplyr))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
hclusterhm(incdat(longdat(a),toclassify="tag"))
```



### Clusters among objects (using kmeans)

---

```
suppressMessages(require(ggplot2))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
ko <- kmcluster(incdat(longdat(a)))
qplot(names(ko$cluster),fill=ko$cluster,xlab="",ylab="")
```




```
message("The clusters are:")
```

```
## The clusters are:
```

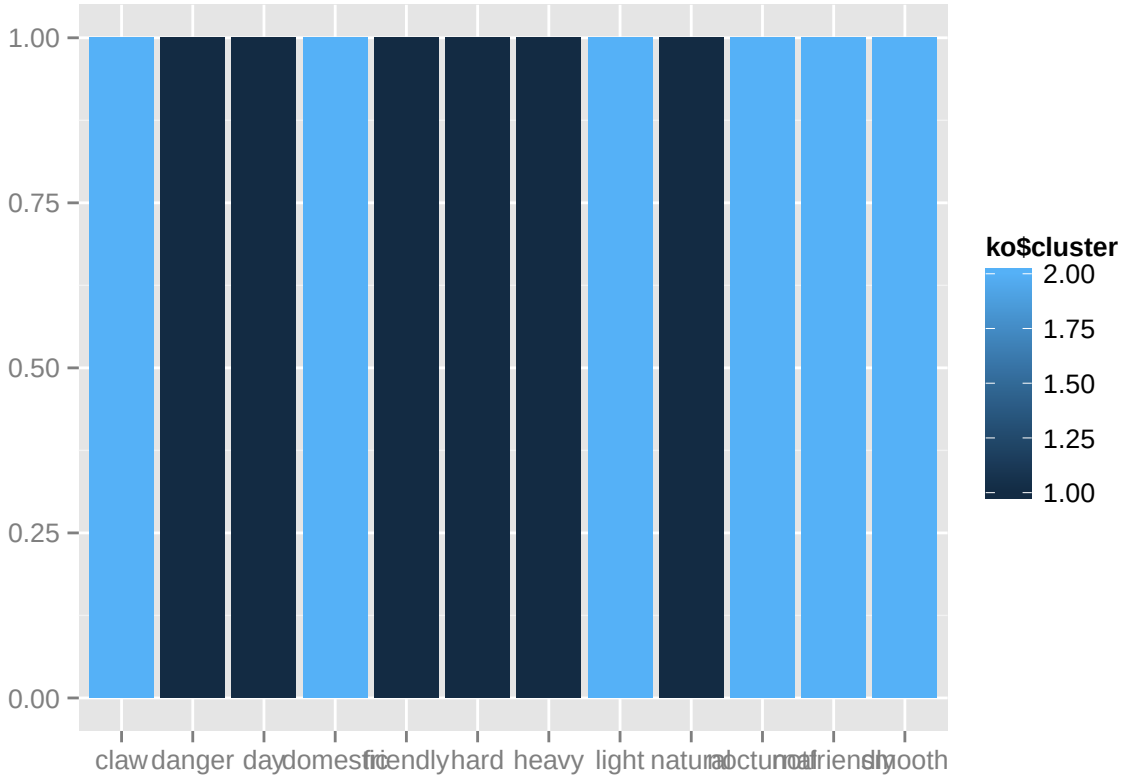
```
print(split(names(ko$cluster),ko$cluster))
```

```
## $`1`
## [1] "cat"  "fish"
##
## $`2`
## [1] "dog"      "monkey"   "bear"     "tiger"    "elephant"
```

### Clusters among tags (using kmeans)

---

```
suppressMessages(require(ggplot2))
source('~/vis_tag_data/vistagdata.R')
a <- read.csv("~/vis_tag_data/taggeddataset.csv",fill=T,colClasses="character")
ko <- kmcluster(incdat(longdat(a),toclassify="tag"))
qplot(names(ko$cluster),fill=ko$cluster,xlab="",ylab="")
```




```
message("The clusters are:")
```

```
## The clusters are:
```

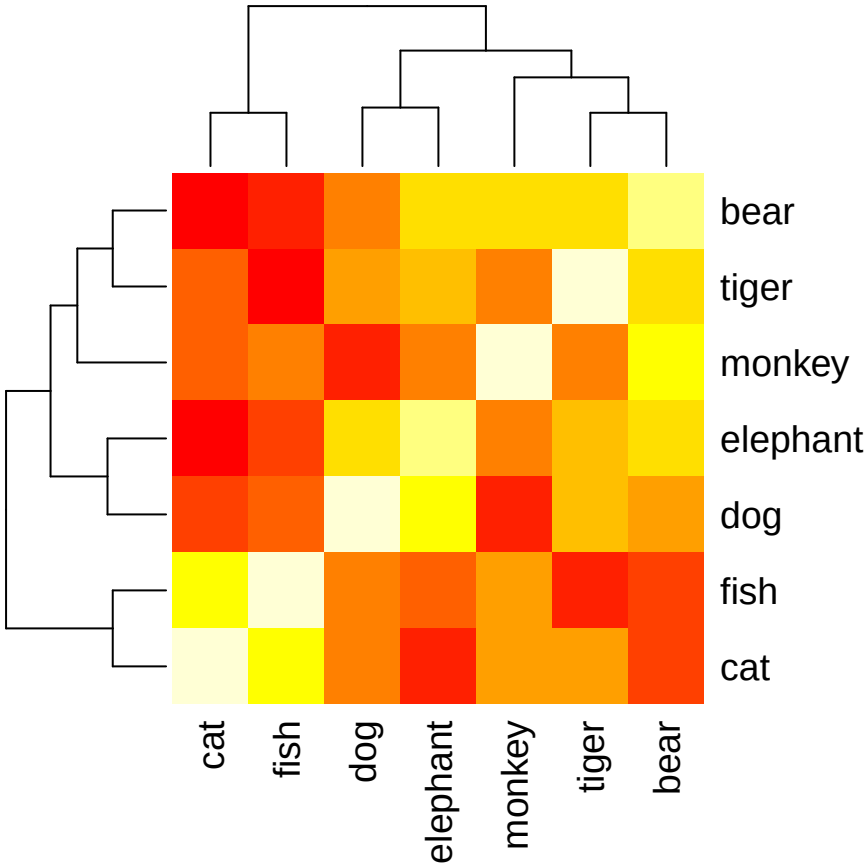
```
print(split(names(ko$cluster),ko$cluster))
```

```
## $`1`
## [1] "danger"    "day"       "friendly" "hard"      "heavy"     "natural"
##
## $`2`
## [1] "claw"        "domestic"    "light"       "nocturnal"   "notfriendly"
## [6] "smooth"
```

### Number of tags shared by objects

---

```
heatmap(sharedtable(incdat(longdat(a))))
```



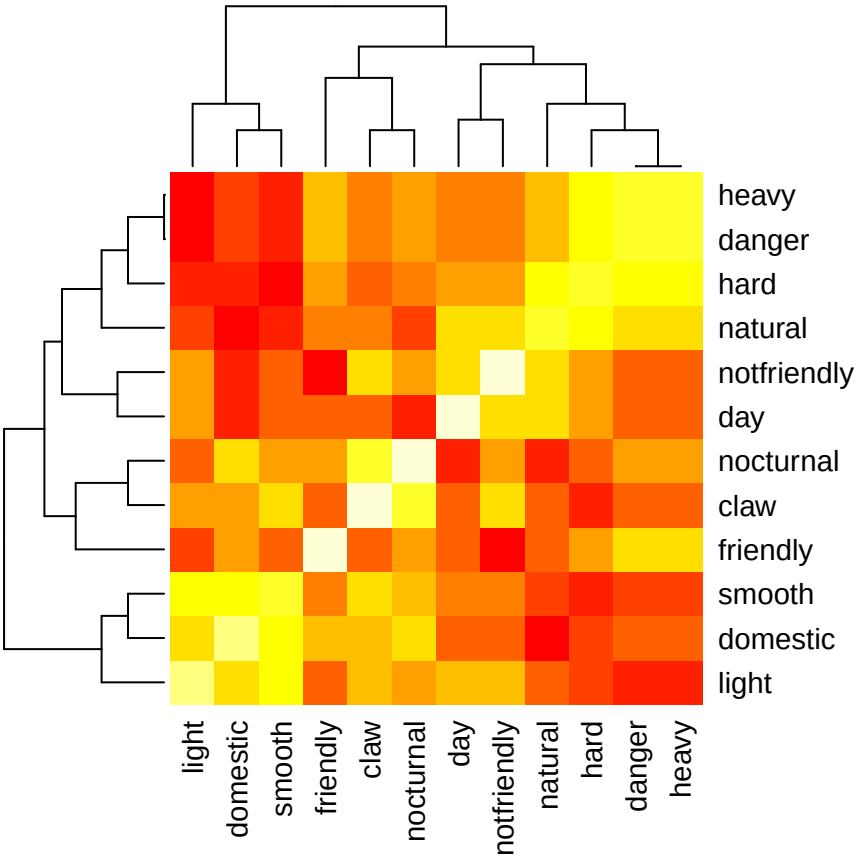

```
print(sharedtable(incdat(longdat(a))))
```

```
##          cat dog monkey bear fish tiger elephant
## cat       12   4      5    2    9     5        1
## dog        4  12      3    6    5     7        9
## monkey     5   3     12    9    6     6        6
## bear       2   6      9   12    3     9        9
## fish       9   5      6    3   12     2        4
## tiger      5   7      6    9    2    12        8
## elephant   1   9      6    9    4     8       12
```

### Number of objects shared by tags

---

```
heatmap(sharedtable(incdat(longdat(a),toclassify="tag")))
```




```
print(sharedtable(incdat(longdat(a),toclassify="tag")))
```

```
##             claw danger day domestic friendly hard heavy light natural
## claw           7      3   3        4        3    2     3     4       3
## danger         3      7   3        2        5    6     7     0       5
## day            3      3   7        2        3    4     3     4       5
## domestic       4      2   2        7        4    1     2     5       0
## friendly       3      5   3        4        7    4     5     2       3
## hard           2      6   4        1        4    7     6     1       6
## heavy          3      7   3        2        5    6     7     0       5
## light          4      0   4        5        2    1     0     7       2
## natural        3      5   5        0        3    6     5     2       7
## nocturnal      6      4   2        5        4    3     4     3       2
## notfriendly    5      3   5        2        1    4     3     4       5
## smooth         5      1   3        6        3    0     1     6       1
##             nocturnal notfriendly smooth
## claw                6           5      5
## danger              4           3      1
## day                 2           5      3
```

```
## domestic           5          2      6
## friendly           4          1      3
## hard               3          4      0
## heavy              4          3      1
## light              3          4      6
## natural            2          5      1
## nocturnal          7          4      4
## notfriendly        4          7      3
## smooth             4          3      7
```