**Lists, why would you need them?**

Congratulations! At this point in the course you are already familiar with:

* **Vectors** (one dimensional array): can hold numeric, character or logical values. The elements in a vector all have the same data type.
* **Matrices** (two dimensional array): can hold numeric, character or logical values. The elements in a matrix all have the same data type.
* **Data frames** (two-dimensional objects): can hold numeric, character or logical values. Within a column all elements have the same data type, but different columns can be of different data type.

Pretty sweet for an R newbie, right? ;-)

# Lists, why would you need them? (2)

A **list** in R is similar to your to-do list at work or school: the different items on that list most likely differ in length, characteristic, type of activity that has to do be done, ...

A list in R allows you to gather a variety of objects under one name (that is, the name of the list) in an ordered way. These objects can be matrices, vectors, data frames, even other lists, etc. It is not even required that these objects are related to each other in any way.

You could say that a list is some kind super data type: you can store practically any piece of information in it!