Kungliga Tekniska Högskolan
DH 2321 - Information Visualization

A TOOL FOR CREATING GROUPS

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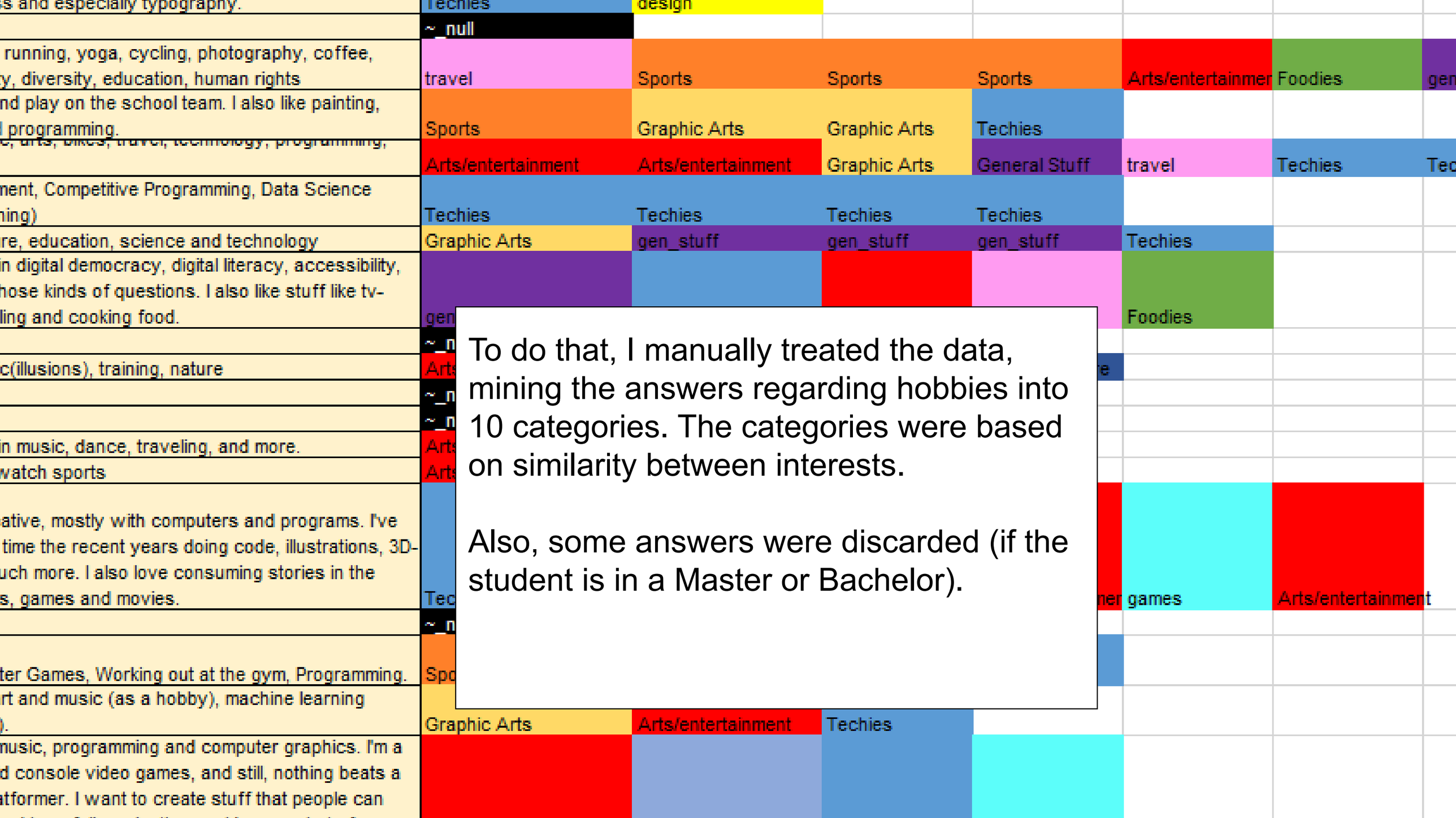
Creating groups is not an exact science. People are unpredictable, and simply merging them into groups can lead to dysfunctional teams, even if the members are the most skilled among possible options.

To deal with this, my idea was to base the group suggestion on shared interests and hobbies, a qualitative measure that might approximate people that get along better, and, consequently, work better together.



To do that, I manually treated the data, mining the answers regarding hobbies into 10 categories. The categories were based on similarity between interests.

Also, some answers were discarded (if the student is in a Master or Bachelor).

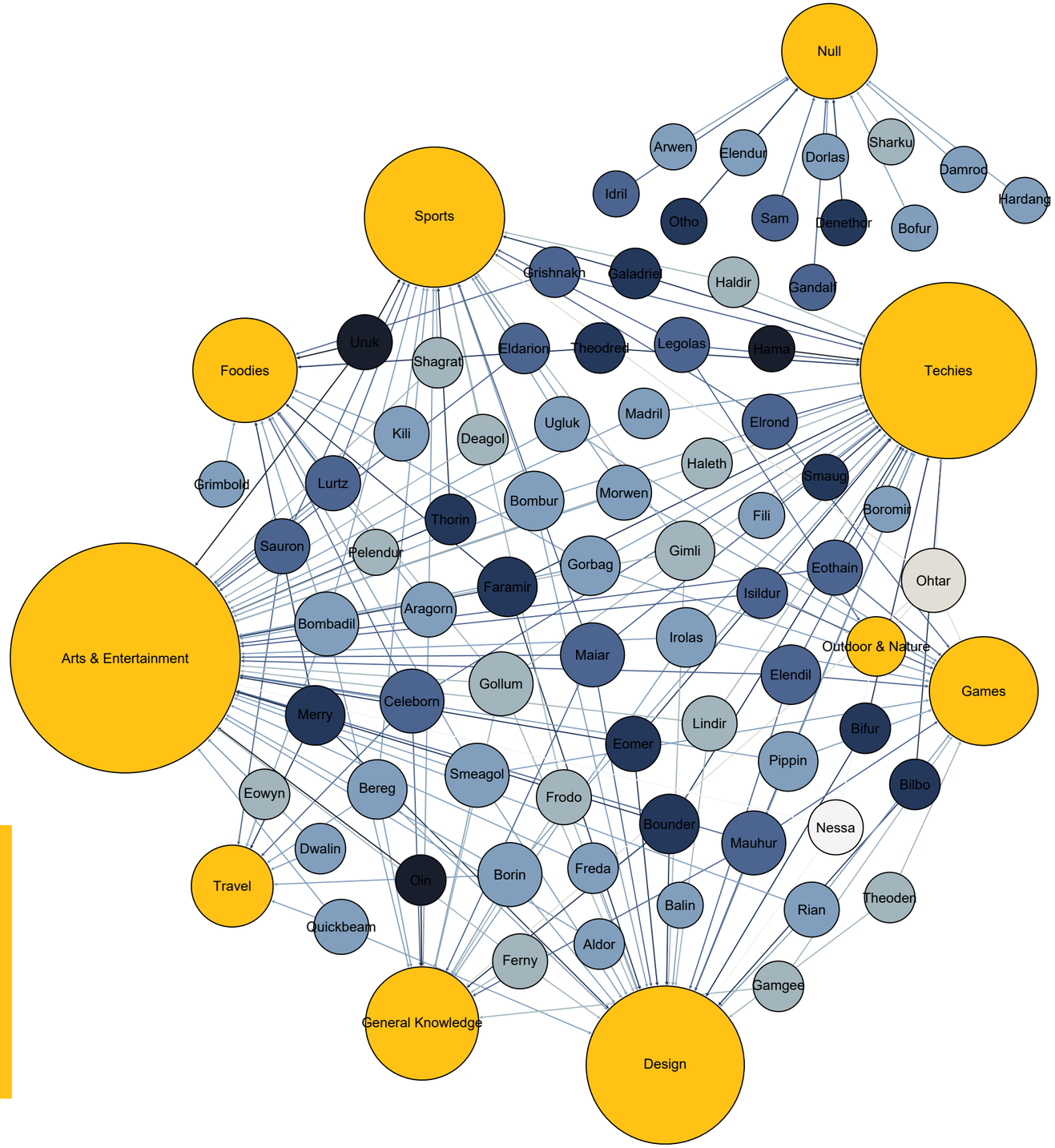
accommodate to complex treemaps.

Network: sometimes relationships among items cannot be conveniently captured with a tree structure and it is useful to have items linked to an arbitrary number of other items. While many special cases of networks exist (acyclic, lattices, rooted vs. un-rooted, directed vs. undirected) it seems convenient to consider them all as one data type. In addition to the basic tasks applied to items and links, network users often want to know about shortest or least costly paths connecting two items or traversing the entire network. Interface representations include a node and link diagram, and a square matrix of the items with the value of a link attribute in the row and column representing a link.

Examples: Network visualization is an old but still imperfect art because of the complexity of

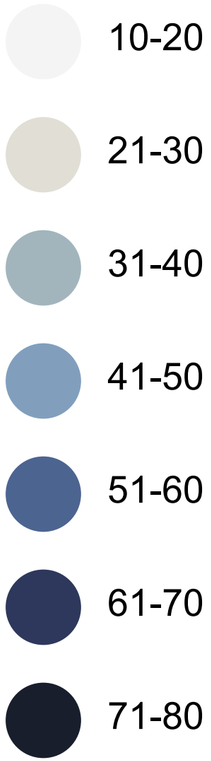
Given the non hierarchical nature of the data, I decided to use a network visualization, as categorized by Shneiderman (1996)

Network Visualization of the class interests. Yellow nodes represent the categories, blue nodes the students.



The shades of blue are related to how skillful an user perceive itself, from a scale from 10-90* (sum of notes in the survey).

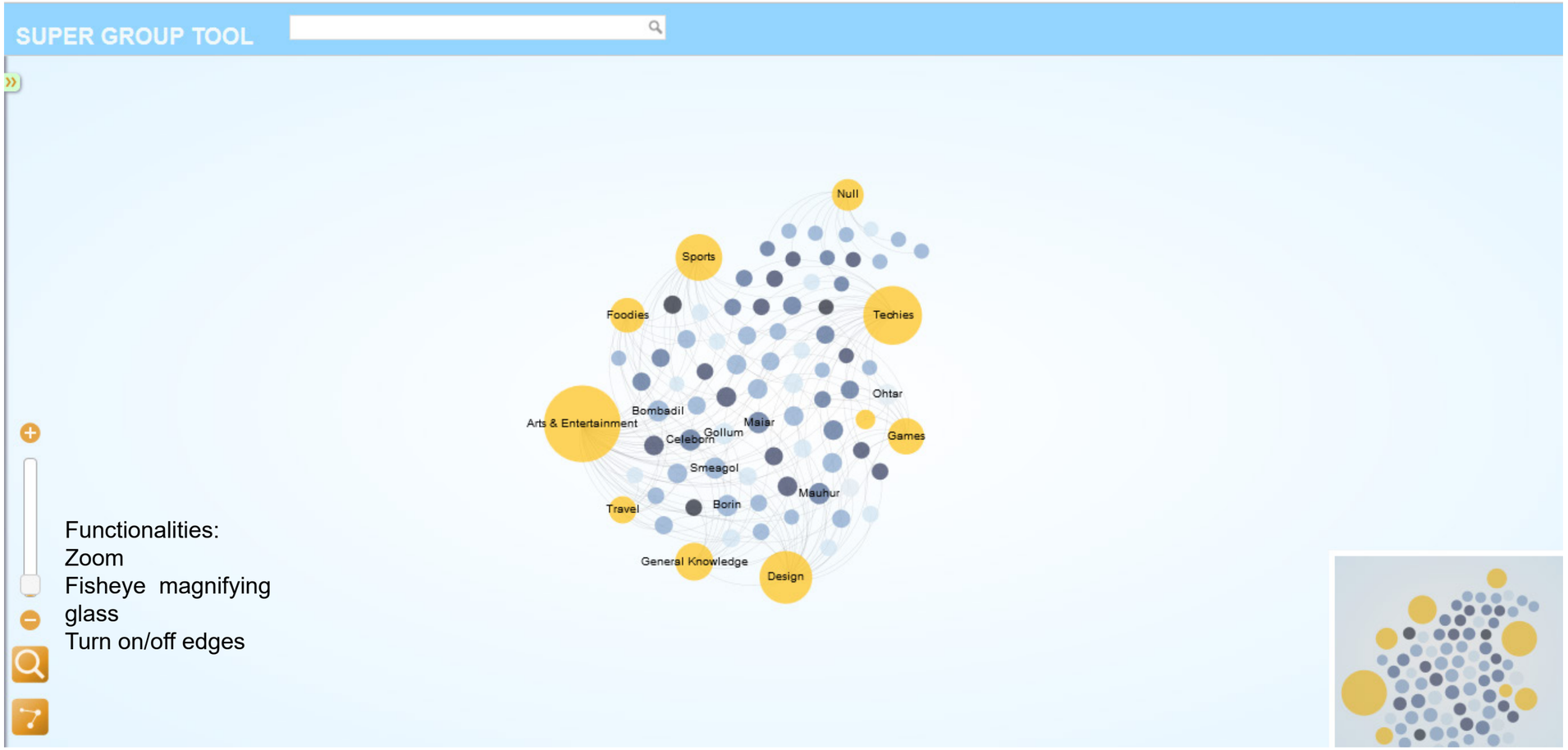
Every skill counted the same, there were no weightning.



USING THE TOOL

The visulization was made with Gephi, and the interaction is a modified version of the code by Raphael Velt, [which can be found here.]

when acessing the tool, the user gets an overview of the network.



Functionalities:
Zoom
Fisheye magnifying glass
Turn on/off edges

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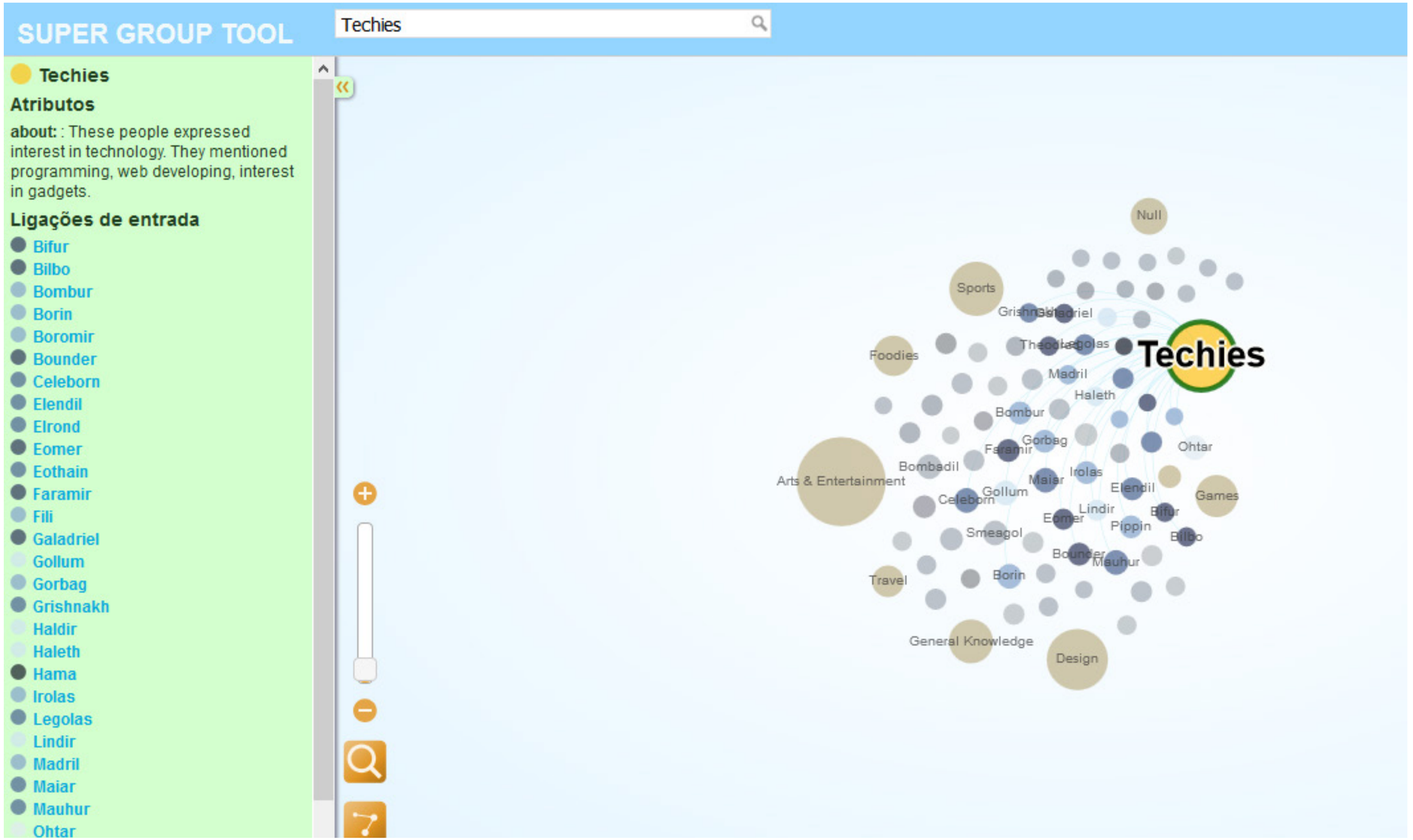
When double-clicking a category node, the user can see an explanation about it and all the users in the category.



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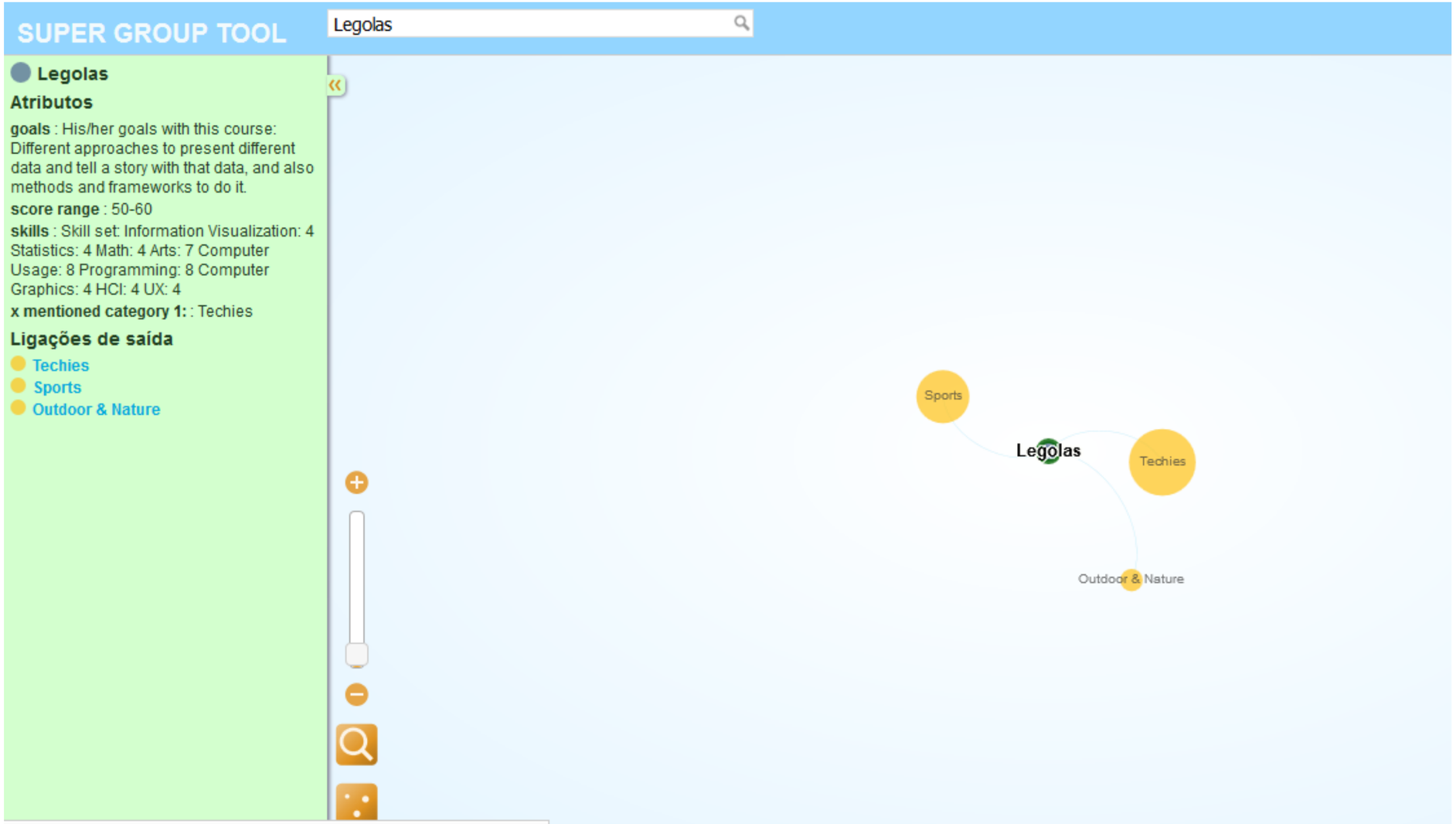
On the student node, it is possible to see what he/she answered about goals, how he/se filled the skills and to which categories he/she belongs.



The goal of this tool is to help people make choices about groups, an aid to show how closely related people interests are. It is not to be a decision maker by design, that task is put in the hands of the user.

It is available on this link:
https://quizomba.github.io/ *

*Apparently, it does not work 100% on Google Chrome. For better performance, please use Firefox.

REFERENCES

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