# Aqu-Scape

## Introduction

Aqu-Scape is an online tool that helps aquarists to design their aquarium layouts. It allows user to select dimensions of the aquarium and then place variable sized plants, stones and tree branches and roots into the aquarium. The software will have a database where plant information is stored (scientific name, light requirement, height and perimeter of the plant). The tool will allow placing objects on top of another but will note that if a plant with high light requirement would be shaded by another taller plant.

There is an existing tool that allows user to pick plants and tell if their water requirements are compatible (temperature, pH and dH). Once user is done selecting the plants, he or she can design the layout of the tank using this new tool (all the selected plants will be passed as a url parameter to the new service).

## Expected List of Features

Following are the list of features that will be part of the final product:

1. Selection of the layout size (it will not make the drawing layout bigger, instead all the objects placed into it are smaller)
2. Will show the layout from the top and from the front
3. Canvas of objects, including all the previously selected plants, stones and tree material
4. User can draw/place the objects on the layout
5. Objects will be shown on the layout using simple geometrical shapes such as circles
6. Each plant will have its own color (most likely different shades of green and red)
7. Option to print the drawn layout (this option might only be made possible on non-mobile platform) with information about the plants included
8. Cannot be used as a stand-alone tool (requires using the other tool first to select the plants)
9. Shared database with the other tool for retrieving the plant information

Features 1, 2, 3, 4 and 5 are absolutely necessary so that the tool can be useful for the end user. An existing tool will be used for selecting the plants thus 8 is a required feature.

In addition there are some possible features that might not make it to the final product due to time constraints or design choices:

- Language support in finnish and english
- Tutorial video how to use the tool (embedded on the web site)
- Administrative tools for CRUD (create, read, update, delete) operations for plants

## Market Survey

- aquariuminfo.org
  - Provides aquascaping guides
  - Provides additional info about aquascaping but does not provide online tools
- theaquariumguide.com
  - Provides aquascaping guides
  - Provides additional info about aquascaping but does not provide online tools
- Smartdraw
  - Design tool for drawing floorplans
  - Drawing tool but not intended for home floor planning not aquarium use
- Roomstyler 3d home planner
  - 3D design tool for drawing floorplans
  - Drawing tool but not intended for home floor planning not aquarium use
- Autodesk Homestyler
  - Design tool for drawing floorplans
  - Drawing tool but not intended for home floor planning not aquarium use

## References

- Aqu-Choice
  - Online tool for selecting aquarium plants that will be used with Aqu-Scape (currently written for finnish users)
- Akvaariokasvit (author Markku Varjo, 2011)
  - Information about the selected plant properties will be copied from this book to the tool