

## HydraZen Application – Quick Guide

HydraZen was developed to be used as demo of a display that will read the amount of water that users drink along time and it will help stimulate water consumption.

Each user will set his/her goal and the application will work with percentages related with that goal. (goal is set as number of cups of water)

By drinking water, user will help a virtual water lily to grow.

Run the executable file “HydraZen.exe” which is inside the “HydraZen Application” folder . (It can take a while to load).

Main screen displays a lake with seven leaves, each one corresponding to one group. (Professors, Admin, Researchers, MET, MHCI, MCS and PAHT students).

The size of the leaf depends on the daily percentage achieved by the group. When goal is achieved it displays a yellow water lily.

On this same screen is displayed on the upper left corner random profiles with informative messages about water. Also shows a thumbnail of the current stage of the plant belonging to the displayed profile.

By clicking on a leaf it's possible to see a list of users that make part of that group. The percentage shown in front of the user name is the individual contribution to the group goal achievement. The swan indicates the level of achievement. By clicking on the first name of a user it's possible to open the profile with his/her flower displayed on the lake.

To return to the groups screen press the “g” key or if the list is still open just click on the close symbol.

By pressing the “f” key the application randomly choose a user and simulate the consumption of a cup of water. It displays the user profile with a message related to the daily level or to the flower stage.

By pressing the “1”, “2” or “3” key it simulates consumption of the user number 1, 2 and 3 respectively . This can be very usefull when testing specific situations.

The “n” key prepares the application for a new day, resets the counters, saves data and closes application. This action should be taken at the end of the day. If somehow the application is closed without pressing “n”, it saves data but don't reset counters to start a new day. This might be usefull in case of need to shut down the application along the day.

### Plant evolution

The leaf it's the initial stage of the plant. The size of this leaf also indicates the daily level achieved. It can get bigger on 3 different situations, when user reach 50% of the goal, 75% and the goal itself.

If the user is able to achieve at least the minimum level for 5 days, it will be displayed the flower button. This will surprise the user and it can stimulate the user to drink more water to see the flower “grow”.

If the user is able to reach 3 more days with at least minimum level achieved, the flower “opens”. The full flower is displayed with transparency to serve as guidance to know how much petals are needed to reach the complete flower.

Each petal is added following this 3 different situations:

3 days with minimum level achieved (50% of the goal);  
2 days with medium level achieved (75% of the goal);  
1 day with goal achieved.

After the flower is completed, it's expected that the user will keep it alive by keeping good water levels. If the user reach 5 days with the goal achieved, it will get a surprise, a butterfly will come to visit the flower as a signal of a healthy plant. Repeating the same good habits for 15 days and a second visit will appear, this time a dragonfly. At this time the user is ready to go to the next level, the goal is now increased one cup more. The mechanic continues the same, the difference is that will be harder for the user to keep.

3 days without reaching the minimum level it will cause the flower to lose petals that will be displayed aside on the lake, also the background will be displayed more “dry” as a signal of not much healthy habits. This situation will reverse as soon as the minimum level is achieved. If the user lets the flower lose all its petals, it also lose the complete flower restarting just with the leaf. Also the user goal is decreased since it was not able to keep achievement of levels.

## Sounds

When the main screen is on, showing the group leaves, ambient sounds are played always when a different profile is displayed, each sound corresponds to the user daily achievement so far:

minimum level not achieved yet: a relaxing/meditating music;  
minimum level achieved: nature atmosphere with birds singing;  
medium level achieved: nature atmosphere, birds and cicadas singing;  
goal achieved: running water like a fountain.

At the moment of drinking water, when personal profile is displayed, a oriental gong is played if minimum or medium levels are achieved. When goal is achieved a different and more intense gong is played. When the butterfly or the dragonfly are added also a new sound is played, a short but intense bird singing.

## Additional information:

This application was programmed in Java language using Processing library. All source code is inside the “Source” folder and “\*.pde” files can be opened using Processing application (downloadable at [processing.org](http://processing.org)).

“Data” folder contains all the images and sound files.

All users information and data is saved and updated each time the application is closed on the file “users\_list.txt”.