Third Homework Computer Music Languages and Systems
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MaracaSpace

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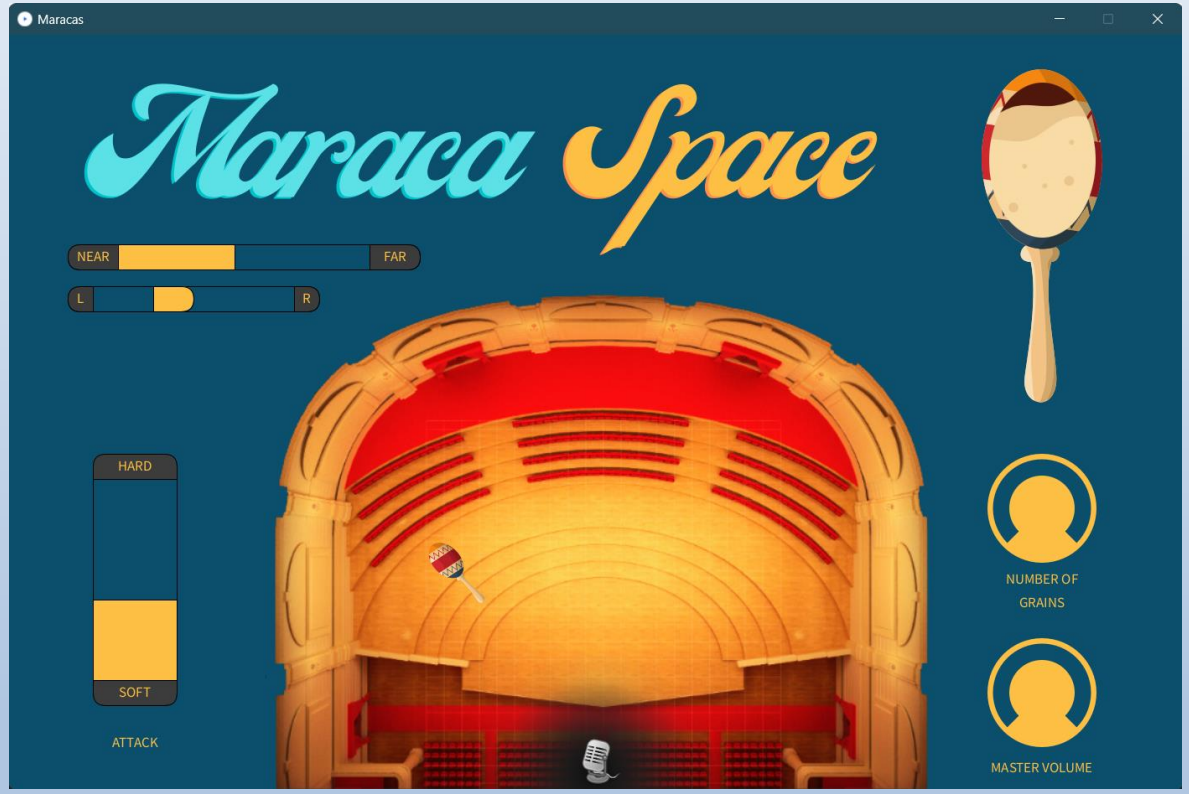
Introduction



Goal: develop a *Computer Music System* whose aim is to simulate the playing of a **maraca** in a certain environment.

Implementation: we realized an application that enables the user to **shake** a fake maraca and to hear sounds modified by certain **parameters**.

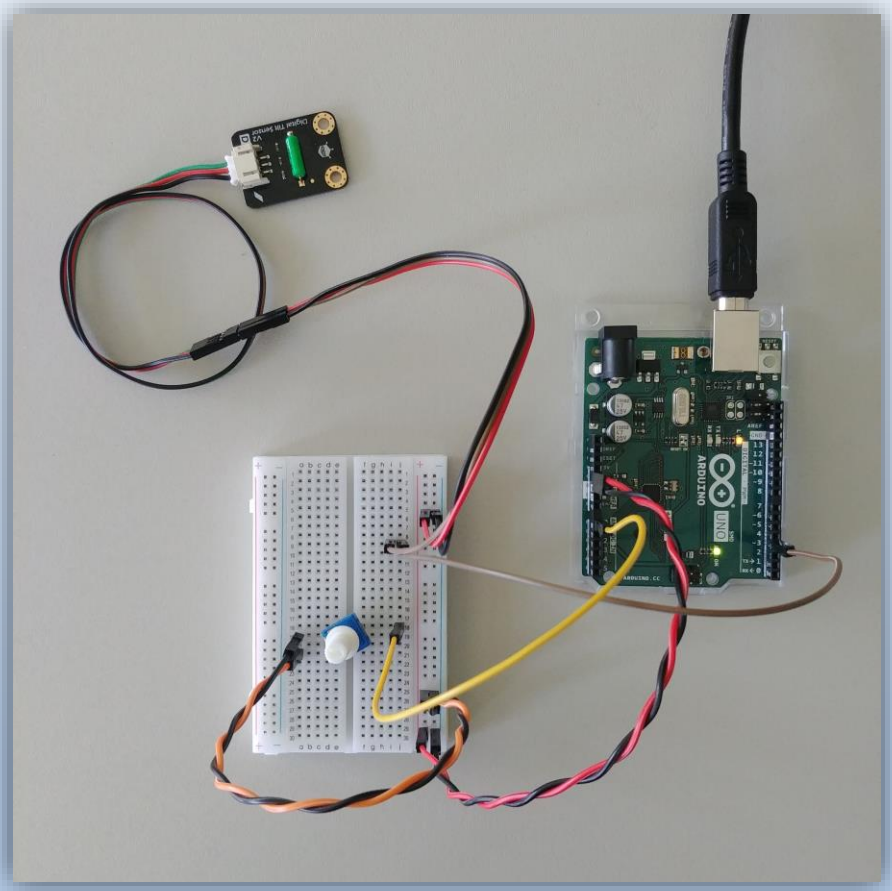
General Structure

Our application, ***MaracaSpace***, is composed by three main components:

- **Sound generation** (Supercollider);
- **GUI** and **Machine to Machine** interaction (processing);
- **Human to Machine** interaction (Arduino, Processing).

In this image, we can see the general workflow of our application.

Hardware Requirements

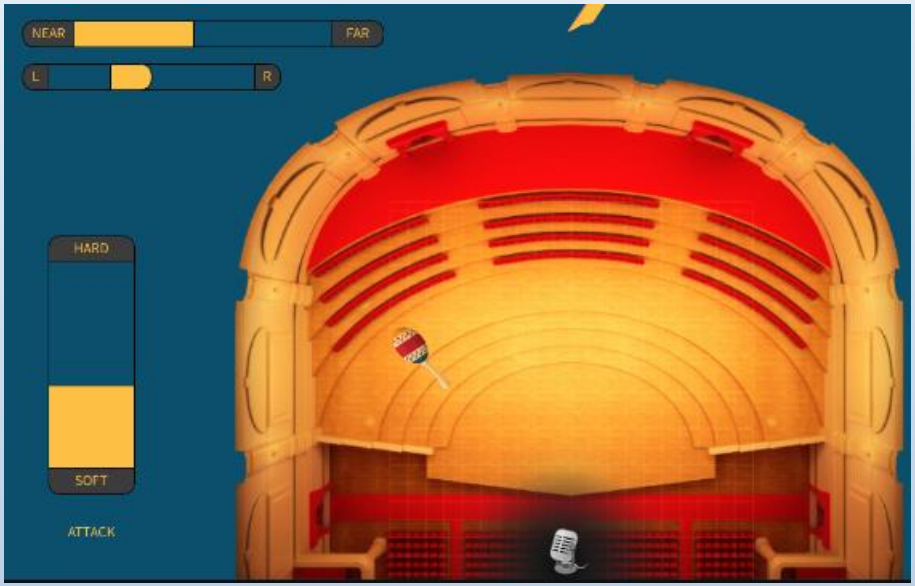


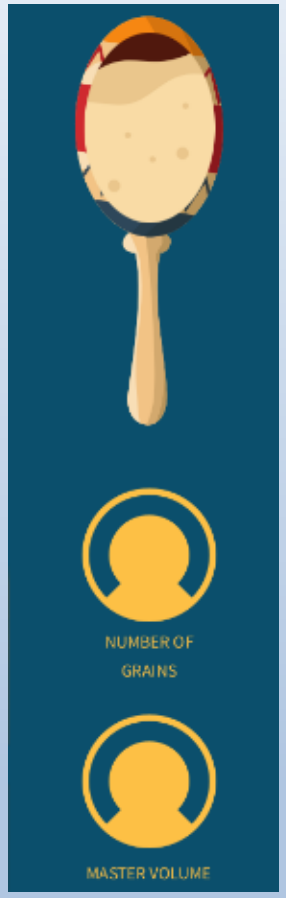
In order to realize our application we needed these hardware components:

- An **Arduino Uno** board to interconnect the devices and the PC;
- A **potentiometer** to manipulate a parameter;
- A **digital tilt sensor** that is the sensor that enables us to simulate the shaking of the maracas.

Modifiable Parameters

The user can move the maraca inside the stage of a theatre and click with the mouse to fix the position. The sound changes based on the position.





With the potentiometer, the user can change the type of attack of the sound. With other sliders, the user may modify also the number of grains inside the maraca and the master output volume.

THANKS FOR YOUR ATTENTION