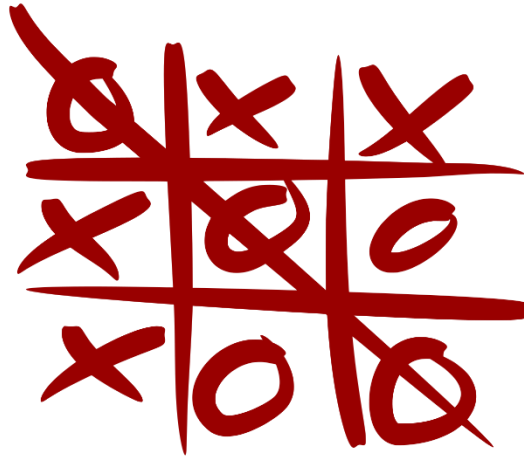


## Tic tac toe Application



*Java Course*  
Embedded System Trace

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# 1. Introduction:

A tic tac toe game with a Java made application that lets the user play a 3X3 game with the computer.

## 2. Software

Desktop application \_ Frame based \_ shows the Tic Tac Toe GUI with:

- A welcoming message
- playing an audio file as a background music
- using 2 scenes
- Animation

## 3. Packages

### 3.1 Communication

- **Serial Protocol**  
Contains three public method called (“Connect”), which we can use with creating objects from the class.
  - Connect  
This method creates a new connection between the hardware and software.
- **Libraries**
  - jSerialComm-2.7.0
  - JSSC
  - RxTx

## 4. Hardware

### joy Stick

Arduino compatible that allows you to create a game console or robotic controller. It will mount on Uno



### Arduino (UNO)

The Arduino Uno is a **microcontroller board based on the ATmega328**. It has 20 digital input/output pins (of which 6 can be used as PWM outputs and 6 can be used as analog inputs), a 16 MHz resonator, a USB connection, a power jack, an in-circuit system programming (ICSP) header, and a reset button.

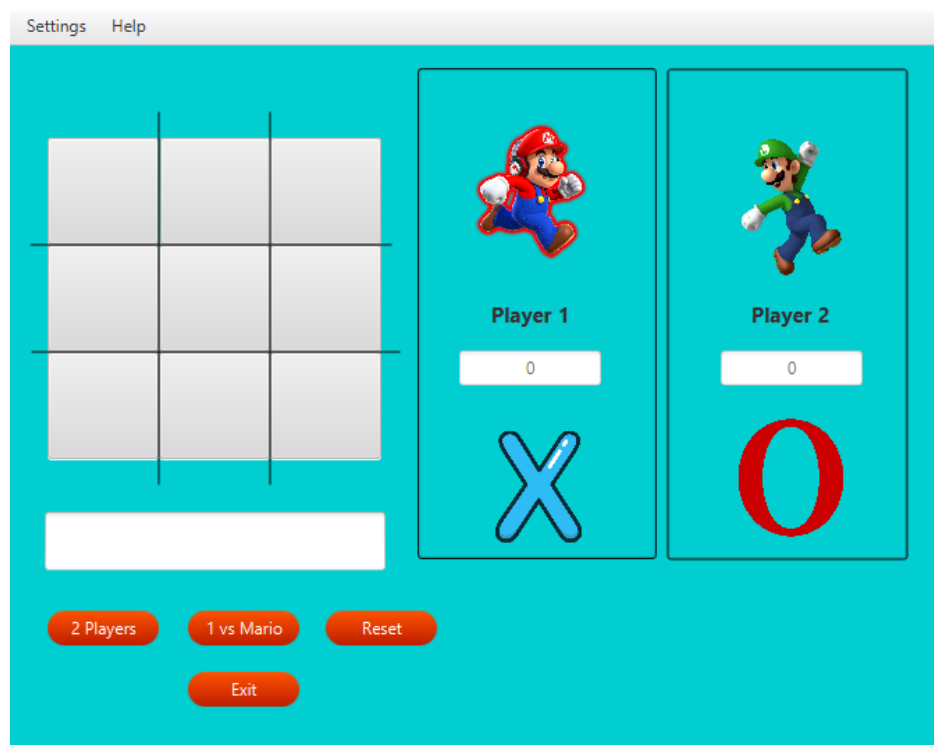


## 5. GUI

### Scene1



### Scene2



## 6.References

- 5.1 <https://www.arduino.cc>
- 5.2 <https://docs.oracle.com/en>
- 5.3 Design Patterns: Elements of Reusable Object-Oriented Software, Grady booch.