

# **Initial report**

## **Team Members**

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# XO Game

## Project Overview

We'll use the Tiva-C LaunchPad to create a XO game. The microcontroller will handle user input (e.g., via push buttons or a keypad), display the game board (e.g., on an LCD ), and determine the game's winner.

## Required Hardware I/O connections

### 1. Tiva-C LaunchPad

The microcontroller serves as the brain of the project, processing inputs and driving the outputs.

- **Power Supply:** The board can be powered via USB (5V).
- **GPIO Pins:** Used to connect the Nokia 5110 screen, switches, and RGB LEDs.

### 2. Nokia 5110 Screen (Blue)

This screen displays the Tic-Tac-Toe board and game status. It uses an SPI interface, which is efficient for communication.

### 3. Switches

Two switches act as inputs for player actions.

### 4. RGB LEDs

Three RGB LEDs visually indicate player turns, game state, or winner.

### 5. Male-Female Jumpers (Connectors)

These connect components to the breadboard and microcontroller.

### 6. Resistors ( $470\ \Omega$ , $10k\ \Omega$ )

### 7. Breadboard