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Mini Project Proposal

Mini Game

Bounce Away

- Object A(Player) jump over the object B(Obstacle) that keep coming toward
- Score will keep on accumulate unless object A is hit by the object A
- The goal is to accumulate as much point as possible
- To make it challenging in each stages the speed will keep increasing along the time

I/O devices require

Inputs

Switch

- On/Off the game

Push button

- Start the game (play/pause button)
- Sound button(mute/unmute)

Analog potentiometer

- To set the speed limit to be increase until

ST7789H2 LCD+FT6x06 Touch Screen

- To select the level of the game
    - Stage 1 – one object B to jump over
    - Stage 2 – two object B to jump over
- Control the movement of object A (jumping)

Outputs

C12832 LCD Display

- The display of the game stats (the scores)

ST7789H2 LCD+FT6x06 Touch Screen

- The display of the gameplay

LEDs

- Red LED

    - Light up when object A hit the object B coming toward it (game over)
- Green LED
    - Light when button on touch screen was push (object A jumping)

PWM speaker

- Short beep will produce every time object A jump (optional)
- Beep every hundreds of the score reach like a checkpoint (start with 100 follows by 200,300……n+100)

Interrupt

Hardware/External Interrupt

- In this program the button and switch act as the external interrupt. When the button and switch are trigger the game will be interfere for example, the game will stop or switch off.

Software/Ticker Interrupt

- Use as increment of speed of each stage along the time

Reference (Inspired by)

Chrome Dino T-Rex