ECE 153B Project Proposal

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Overview

Our goal is to design and implement a UI and controls for the classic game 5-card poker. The player will receive 5 cards, from which they will choose however many to replace. Once the desired cards have been changed with new ones, the CPU will reveal their hand and the player wins or loses currency based on the strength of the player's and CPU's hands.

Peripherals/Protocols

I. Nokia 5110 LCD - SPI

    A. Displays the cards / game itself

II. Wii Nunchuck Remote - I2C

    A. Used to give the player controls, such as selecting cards

III. HC-05 Bluetooth Module – UART

    A. Used to communicate with the terminal on a separate computer

    B. Displays game details such as how much money player has

Block Diagram
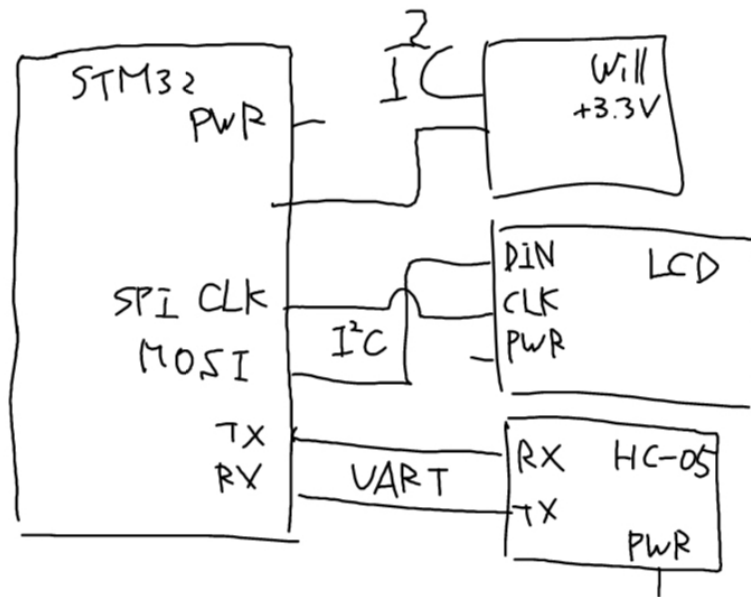
Software

Game logic: Standard 5 card poker will be implemented. We will have a CPU with a random distribution of hands according to probability.

Interrupts: We will generate interrupts for the wii nunchuck's inputs. A Systick interrupt will be used in case there is no input for a certain period of time.

Graphics: The LCD will display the game, while the terminal will keep track of currency.

Responsibilities

Kenya is responsible for the main chunk of game logic/peripheral code, while Kenji will set up the hardware and work on some of the code.

Website

https://sites.google.com/view/5cardpoker