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Focus (profile): Software Engineering and Computer Science

Technical Assignment

Job topic:

‘POKER’

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1 INTRODUCTION

Our project called "Poker" is based on the card game of the same name. We came up with our own simplified version of poker based on "five-card draw". The player and the bot named Konstantin each have 5 cards, 3 of which are visible at the beginning of the round. Depending on the cards, decisions have to be made ("fold", "raise", "check" and "call"). The one who has the strongest combination in the round takes the whole amount from the bid to himself. The one who has the highest balance at the end of the game wins.

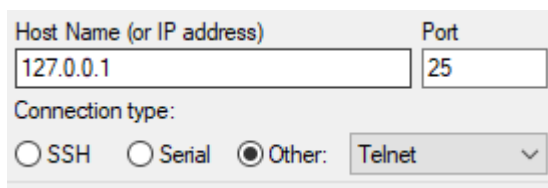
In this technical assignment, we will talk about how to play our game, how to connect to it, and its rules.

2 HOW TO CONNECT?

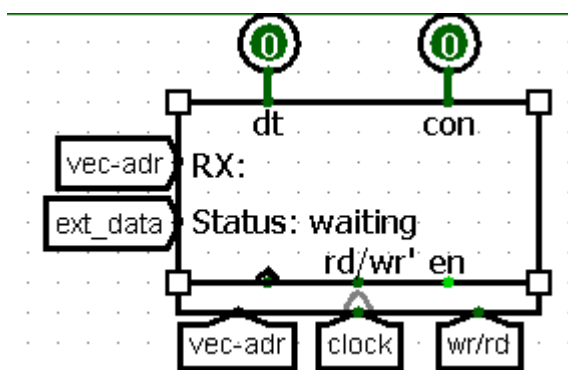
To connect to our game, we recommend using a program called "PuTTY", although any terminal that supports Telnet protocol will also work.

We will describe step-by-step actions using "PuTTY".

- 1) Open our project in Logisim and press - "Ctrl + R"
- 2) Type in "Host Name (or IP address)" - "127.0.0.1" and
- 3) Type in "Port" - "25."
- 4) Then select "connection type" - "Telnet" and press open



If you are unable to connect, change the port in the UART board properties to a different port.



If you are able to connect, press "Ctrl + K" in the Logisim circuit to execute the program.

3 DISPLAY PROBLEMS

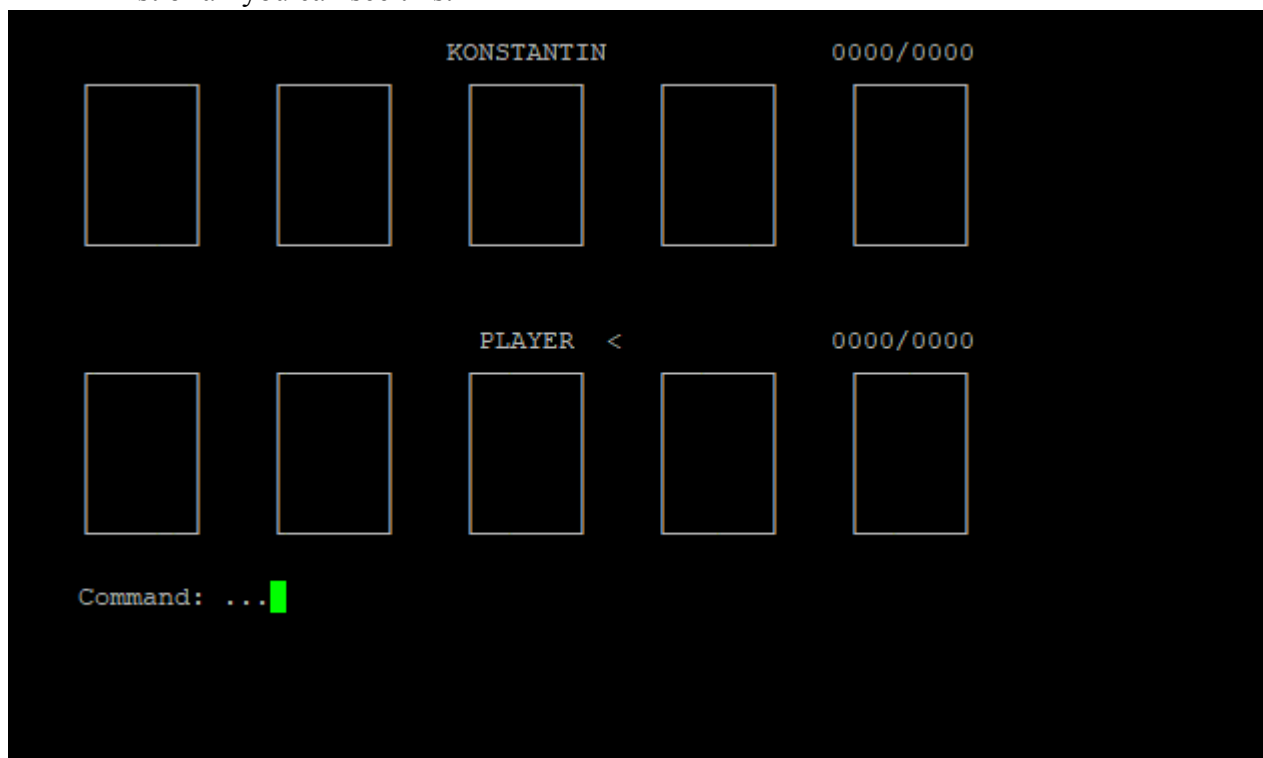
If you have problems with the display (e.g., cards are not displayed, suits are not visible), follow the steps below:

- 1) go to the main scheme of the project

- 2) make sure you install the "out.img" file with the correct path in the ROM next to CDM16
- 3) go to the "interface" subcircuit
- 4) make sure that you have set "output.img" file with correct pat in ROM

4 HOW TO PLAY?

First of all you can see this:



The three dots next to "command" means that for now you have to wait until the interface is like this:



On the right side, you can see the numbers written in "/" where the first number is the bid and the second number is the balance.

Now you see your 3 cards and depending on them you can write the following commands and press enter:

- The "fold" command means that the player or bot has surrendered.
- The "raise x" command means that the player or bot has raised its bid by x ($0 < x \leq 20$). In each half round (i.e. when the player sees 3, 4 and 5 cards) the player can only raise 7 times, also you can only raise when the player and bot balance is equal.
- The "call" command means that the player or bot has raised its bid to the opponent's level.
- The "check" command means that the player or bot continues to play the game without raising the bid.

If you entered the wrong command, don't worry, wait until the space for the command is cleared and try again.

The following card(4 and 5) is shown when both the player and bot entered "check".

The winner of the round is the one with the stronger combination (e.g. "flush" > "pair"). The winner takes the whole amount of bets to his balance

Once the winner has been revealed, you will need to press enter.

At the end of three rounds, the one with the highest balance wins.

Note: do not press anything while the cursor is moving, it may cause errors

5 COMBINATIONS BY STRENGTH

- 1) Royal Flush: A, K, Q, J, 10 all of the same suit.
- 2) Straight Flush: Five consecutive cards of the same suit (e.g., 9, 8, 7, 6, 5 of hearts).
- 3) Four of a Kind: Four cards of the same rank (e.g., four kings).
- 4) Full House: Three cards of one rank and two cards of another rank (e.g., three queens and two tens).
- 5) Flush: Five cards of the same suit, not in sequence.
- 6) Straight: Five consecutive cards of any suit (e.g., 7, 6, 5, 4, 3 of mixed suits).
- 7) Three of a Kind: Three cards of the same rank (e.g., three sevens).
- 8) Two Pair: Two cards of one rank and two cards of another rank (e.g., two eights and two fours).
- 9) One Pair: Two cards of the same rank (e.g., two jacks).
- 10) High Card: When none of the above hands are made, the highest card in the hand determines the winner.