Timer Implementation

* Uses timer to determine distance travelled; maybe less error than motor encoder?
  + Maybe can use combination of timer and encoder—

Pre-Programmed Games:

1. Poker (Green)
   * Texas Hold’em rules
2. Go Fish (Blue)
3. President (Red)
4. “Quick Deal” (Yellow)

Starting flowchart (David)

* Program start
* While loop
  + Wait until user presses a button or shows a colour

Custom User Input Flowchart (David)

* Whether or not the Jokers are in the deck (Specifies either 52 or 54 cards)
* Number of players (1 to 10) (right left buttons)
* Number of cards per player (1 to 52/numPlayers) (up down buttons)
  + Display options, depending on number of players
  + E.g. if 10 players: “Select the number of cards per player, from 1-5 cards”
  + E.g. if 7 players: “Select the number of cards per player, from 1-7 cards”
* Deal in a circle or in a line?
  + drive to the centre, marked by the colour red and deal either in a circle or in a line

Poker (Marko) COLOUR GREEN

Dealing Rules

* Deal 2 cards per player, radially
* Burn 1 card
* Wait for button press
* Deal 3 cards in a line, centre of table (The flop)
* Burn 1 card
* Wait for button press
* Deal 1 card next to the others in a line (The turn)
* Burn 1 card
* Wait for button press
* Deal 1 card next to the others in a line (The river)

**Flowchart**

Start

* Waits until colour is sensed or button is pressed
* If green colour is sensed, activates the poker function
* User input: asks for number of players
  + If button up is pressed and numPlayers is not the maximum (10), increments numPlayers and changes display accordingly
  + If down button is pressed and numPlayers is not the minimum (2), decrements numPlayers and changes display accordingly
* Calls determineAngle function
  + Returns 360 / number of players
* Waits 2 secs

Deal to players

* For loop, repeat this code once per number of players
  + Restarts timer
  + Calls drive function
    - Drives forward until reaches the edge of the table
  + Records current time from timer
  + Calls deal card function, deals 2 cards
  + Restarts timer
  + While function, until the timer value equals the previously recorded timer value
    - Calls drive function
      * Drives backwards
    - (Maybe includes a check for a colour in the middle of the table, if it notices that it has gone past the middle but the timer hasn’t been completed yet, it stops)
  + Calls rotate function
    - Rotates according to the value from the determineAngle function

Burn 1 card

* Calls drive function
  + Drives forward a bit
* Calls deal card function, deals one card
* Calls drive function
  + Drive backwards same distance as moved forward
* Display prompt
  + “Press enter button to deal the flop”
* While loop, wait until user presses a button to continue

Dealing the flop

* For loop, repeats 3 times
  + Calls deal card function, deals 1 card
  + Calls drive function
* Display prompt
  + “Press enter button to deal the turn”
* While loop, wait until user presses a button to continue

Burn 1 card

* See above

Dealing the turn

* Calls deal card function, deals 1 card
* Calls drive function
* Display prompt
  + “Press enter button to deal the river”
* While loop, wait until user presses a button to continue

Burn 1 card

* See above

Dealing the river

* Calls deal card function, deals 1 card

Returns to home screen

Go Fish Flowchart (Rohan) COLOUR BLUE

* Gets user input
  + Number of players
* Deal 7 cards for 2 - 3 players or 5 cards to 4+ players
* Once the robot has stopped dealing, it will prompt the user to “go fish”, at this point the game starts.
* Wait till button is pressed to deal a singular card and will do so until cards are finished or someone has won (i.e no cards left)

President (Chanuth)

* User input: how many players?
  + Max 7 players
* Is linear or radial?
* Deal one card per player
* While less than total cards
  + Deal from centre to player
* stop

“Quick Deal” Flowchart (Rohan)

* Wait till up button is pressed
* Once pressed, release 1 card