

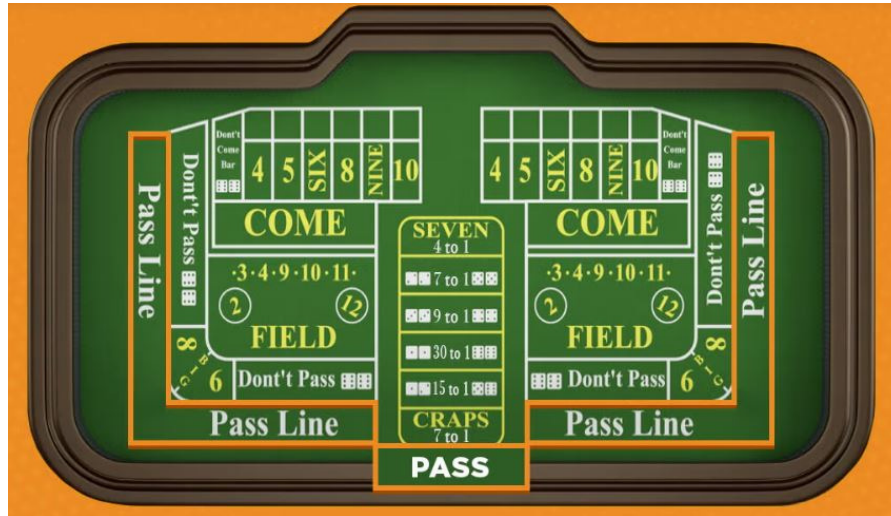
ECE 476/676 - Homework #11

BlueTooth

Craps!

Write a Python program to play a simplified game of Craps on your Pico board from your cell phone with a Bluetooth interface

- On reset, you start with \$100 in your bank account.
- Your bank value is displayed on
 - The LCD display and
 - Your cell phone via a Bluetooth message
- You can then place bets



A game of Craps has two phases

OFF Phase (new game)

- Players start by placing a bet on the PASS line (and money is subtracted from their bank)
- You then roll two 6-sided dice
 - If the roll is 7 or 11, the game is over and you win. The player's bank is increased by 2x the PASS bet
 - If the roll is 2, 3, or 12, you rolled craps. The game is over and you lose.
 - If the roll is anything else, the die roll becomes the POINT and the game reverts to the ON phase
- If the game is over, all bets are cleared and you go back to the start of the OFF phase

ON Phase (POINT = 4, 5, 6, 8, 9, 10)

- In the ON phase, the POINT remains the same until the game is over
- At the start of each round, players can do a PLACE bet on numbers 6 or 8
- Once all bets are placed, two 6-sided dice are rolled
 - If the roll is the POINT, the player wins and the game is over. The player's bank is increased by 1.2x the PASS bet (rounded down)
 - If the roll is 7, the player loses and the game is over.
 - If the roll is anything else, the game continues to another ON phase with the same POINT.
- If the game is over, all bets are cleared and you go back to the start of the OFF phase

While a game is ON, players can put make PLACE bets. For this version, you can only make PLACE bets on numbers 6 and 8

- If the roll is a 6 or 8 while in the ON phase, the play'er bank is increased by 1.2x the respective PLACE bet (rounded down). The PLACE bet remains and will generate more money if another 6 or 8 is rolled.
- Once the game ends, all bets are cleared - incuding PLACE bets - and you go back to the start of the OFF phase

Grading

- (10pt) LCD display shows bank balance, phase, point, and bets
- (10pt) Cell phone displays bank balance, phase, point, and bets
- (10pt) Accept PASS bets from your cell phone via Bluetooth in the OFF phase.
 - Use the keyboard if you can't get bluetooth to work (no points for this)
- (10pt) Can toss the dice with a bluetooth message
 - Use a button is you can't get bluetooth to work (no points for this)
- (10pt) Game ends with a win on a roll of 7 or 11. Loss with a roll of 2, 3, or 12 (craps)
- (10pt) Game goes into the ON phase with the POINT being the die roll for any other result
- (10pt) Can accept bets on 6 or 8 in the ON phase
- (10pt) Can roll dice in the ON phase once bets are placed
- (10pt) With a roll of 6 or 8, the player's bank increases by 1.2x the PLACE bets on 6 or 8.
- (10pt) ON phase ends on a 7 (loss) or POINT (win). Adjust your bank balance, clear all bets, go back to the OFF phase, and start a new game
- (10pt) Demonstrate your Craps program.

Craps

Bank:	\$85	Bets	
Phase:	ON	Pass	\$10
Point:	5	6	\$0
		8	\$0
Roll:	2 + 6		