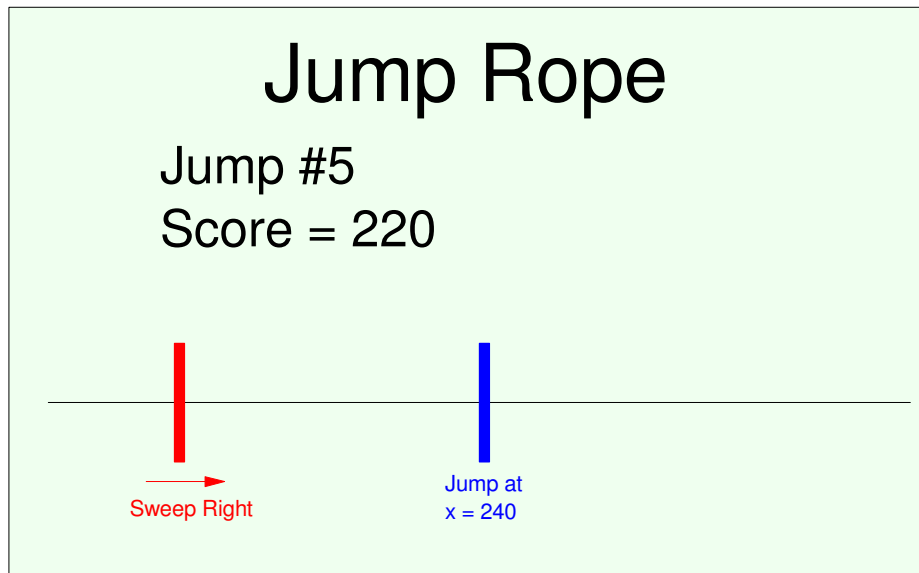


ECE 476/676 - Homework #6

Math Library, Random Library, Matrix Library, Edge Interrupts



Jump Rope

Write a python program to play the game of jump rope.

- At the start of each round, a random number is generated in the range of $T = 500$ to 1500 . This is how long it takes for the rope to travel from $x=0$ to $x=479$
- The jump rope (red line) then sweeps from $x=0$ to $x=479$ in T ms (500ms to 1500ms).
- The player is to press button GP15 before the jump rope crosses midband ($x = 240$)
- A new game is initiated by pressing GP14 (Jump goes to 0, Score goes to 0)

If you jump too late, the game starts over at jump #0

If you jump before the jump rope crosses $x = 240$, you score points

- Points = $100 - (\text{the number of milli-seconds you jumped too early})$

note: To measure time, please use the `ticks_ms` or `ticks_us` routines from the Timer library.

- Timer interrupts come next week

Grading:

- 10pt Generate a random number each round in the range of $T = 500$ to 1500
- 10pt Use edge interrupts to record the time you press GP15
- 10pt Use edge interrupts to start a new game when you press GP14
- 10pt Rope sweeps along the LCD display
- 10pt LCD displays jump number and score
- 10pt Demonstrate your code