Cricket Scoreboard Simulator on Pt-51

1. [20 points] In this project, you will be writing a program to simulate a cricket scoreboard for a 20 over game. The inputs of the scorer will be obtained using key presses on a keyboard connected to Pt-51 using UART.

   - The LCD should always display the current score and the number of overs bowled on the first line.
     - The format should be `Runs/Wickets (Overs.Balls)`. For example, `45/3 (15.2)` means that 45 runs have been scored in 15 overs and 2 balls for the loss of 3 wickets.
   - The LCD should show the events of the **current over** on the second line in the following format. You can assume that each over does not have more than 16 balls.
     - The event which occurred on a ball is denoted by a single character. There are no spaces between the characters corresponding to consecutive balls.
     - A dot ball is denoted by a period symbol (also called the fullstop symbol). So a maiden over without extras or wickets is denoted by 6 periods without spaces between them. Like `......`
     - Runs scored on a ball are denoted by the single digit number. For example, an over with 6 sixes will be denoted by `666666`.
     - If a wicket falls in a ball, it is denoted by the `W` character. For simplicity, assume that there are no runs scored on a wicket ball (like a runout).
     - A wide ball is denoted by the `E` character, as in extra (since `W` denotes wicket and we want to use only one character per ball).
     - A no-ball is denoted by the `N` character. For simplicity, assume that there are no runs scored off a no-ball.
     - For simplicity, assume that there are no runs scored as byes.
     - For example, the second line of the LCD having text `.E6W` indicates that four balls have been bowled in the current over where the first ball was a dot ball, the second one was a wide, the third ball went for a six, and the fourth ball fetched a wicket.
   - At the start of a game, the first line should show `0/0 (0.0)`.
   - The scorer will press a series of keys which will move the game forward and change the scoreboard state.
     - To denote a dot ball, the scorer will press `.` (the period key).
       * The score should remain the same and the number of balls bowled should get updated on the first line of the LCD.
       * A dot should appear on the second line in the rightmost empty position.
       * Note that the number of overs completed will increment if the dot ball was the last ball of the over and the over was not the 20th over.
       * If the dot ball was the last ball of the 20th over, the LCD should show the text `Innings Ends` on the second line for 5 seconds and reset the first line to `0/0 (0.0)`.

- To denote runs scored on a ball, the scorer will press either `1,2,3,4,5` or `6`. Note that 5 runs can be scored on overthrows. We will assume more than 6 runs cannot be scored off a ball, again for simplicity.
  * The score and number of balls bowled should be updated accordingly.
  * The number of runs scored should appear on the second line in the rightmost empty position.
  * The behavior after the last ball of the 20th over should be the same as in the dot ball case.
- To denote a wicket, the scorer will press `w`.
  * The number of runs should remain the same. The number of wickets and balls bowled should increment.
  * The character `W` should appear on the second line in the rightmost empty position.
  * When the 10th wicket falls or if the ball was the last ball of the 20th over, the LCD should show the text `Innings Ends` on the second line for 5 seconds and reset the first line to `0/0 (0.0)`.
- To denote a wide, the scorer will press `e`.
  * The number of runs should increment.
  * The number of balls bowled and wickets taken should remain the same.
  * The character `E` should appear on the second line in the rightmost empty position.
- To denote a no-ball, the scorer will press `n`. The behavior of the scoreboard should be the same as the wide case except for the character `N` appearing instead of the character `E`. There is no free-hit after the no-ball.

- The specification above is incomplete as it does not describe the behavior of the scoreboard if an over has more than 16 balls. In test inputs, we will not be entering overs with more than 16 balls.