**National University of Computer and Emerging Sciences, Lahore Campus**

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|  | **Course:** | **Computer Organization and Assembly Language Lab** | **Course Code:** | **EL 229** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Fall 2020** |
| **Duration:** | **December 9, 2020** | **Total Marks:** | **10** |
| **Date** | **December 13,2020** | **Weight** | **3%** |
| **Section:** | **E** | **Pages:** | **2** |
| **Quiz No.** | **2** | **Roll No.** |  |

**Read below Instructions Carefully**

1. Discussion with class fellows is not allowed. It is your responsibility to protect your code and save it from being copied. If you don’t protect it all matching codes will be considered copy/cheating cases.
2. Your code should be properly commented. A code without comments will result in 50% marks.

**Task:**

Write a program to implement a stop watch (Precision = 55 ms) your stopwatch will have the following functionalities.

**1)** 'R' - For resetting it to Zero and Clear Screen

|  |  |  |  |
| --- | --- | --- | --- |
| **HRS** | **MIN** | **S** | **MS** |
| 00 | 00 | 00 | 00 |

**2)** SPACEBAR to start

**3)** ESC to terminate the program

**3)** Split Timing - It will show a snapshot of the clock when SPACEBAR is pressed in the next row.

The first row of the display memory will show the digits of a stopwatch and every time spacebar is pressed, the snapshot of the stopwatch will be taken and it will be printed on the second row of the display memory. It will keep taking snapshot each time a spacebar is pressed and print it on next row until it reaches the last row. After that, it will start over-writing from second row.

**Note:** All the values in the following figure are in decimal.