|  |  |
| --- | --- |
|  | **AIR UNIVERSITY**  **Multan Campus** |
| **Department of Computer Science and Engineering** |
| **DLD Project Proposal** |

|  |  |
| --- | --- |
| **Project title: Key Pad Number Guessing Game** | |
| **Class: BSCS II-A** | **Department: BS(CS)** |
| **Project Participants** : | |
| Student 1: M Hamza Abid  Student 2: Ahmad Ahsan  Student 3: Muhammad Umair  Student 4: Awais | |
| **Project Description :** | |
| In this game the player thinks of any number between 1 and 99. Then he scans the eight groups of numbers given in the eight boxes in the table. The person scans the numbers in each box and slides to ‘on’ position if he finds his number in that box. After having scanned all the eight boxes and switching on the relevant DIP switches, he is required to press switch S9 and the number thought of by the person is displayed on the 7-segment displays. After this, same process will be repeated.  **Components :**   * **Capacitors** * **Resistors** * **Seven Segment Display** * **ICs**   **Project Principle :**  This number guessing game is quite simple. The player thinks of a number between 1-99. Then he scans the eight groups of numbers given in the eight boxes in the table. The person scans the numbers in each box and slides the switch corresponding to a box to ‘on’ position if he finds his number in that box. When it reaches 9, one cycle is completed. Pin 5 is a divide by 10 output pin means after every 10 input pin 5 goes high. This property can be utilized to connect more numbers of 4026. | |

|  |
| --- |
| In short we can cascade many 4026 to increase the number of 7 segment display. That’s why we have connected the pin 5 of IC1 to pin 1 of IC2 to cascade another IC, after every 10th pulse it will go high to provide a clock pulse to IC2 to advance its counter. |
| **Project Submission Date:**  May 2022 |
| **Additional Information:**  In this number guessing game circuit, NE555 a stable generates a clock for the circuit, which provides a oscillating wave to the output pin 3 of IC1. The time period of counter can be calculated by following formula:  **T = 0.7 (R1 + 2\*R2)\*C1.**    As shown in circuit diagram, Connect the pin 3 of both the IC1 and IC2 to supply, to on the display. If pin 3 is connected to ground we will not get display on 7 segment output. Also connect the pin 15 which is a reset pin to ground so that when counting reaches to 99 it will reset the counter to zero. Lastly, connect the pin 2 to ground if this pin is held high then counter will not advance. Now apply power supply. Zero will be displayed on both the 7 segment display. And counter starts counting by receiving pulse from IC3. As NE555 is wired in a stable mode it is generating continuous pulses which make the clock pin1 of IC1 high after every specific period of time. |
| **Instructor Signature: Date:** |