**Proposal**

**Course:**

**Fundamentals of Digital Logic Design**

**Submitted To:**

**Sir, Junaid Iqbal**

**Submitted By:**

**Umair Asghar (093)**

**Faizan Khalid (032)**

**Ayan Javed (021)**

**Umair Ahmad (092)**

**Muhammad Umar(074)**

**Department of Computer Science**

****

**COMSATS University Islamabad, Vehari Campus**

**Project: Digital Dice with 7-Segment Display Using Arduino UNO**

**Objective:**

To create and develop a digital dice system that mimics the rolling of an ordinary 6-sided dice using a 7-segment display, push button, and Arduino UNO. The project is intended to showcase the application of digital logic and embedded systems.

**Components Required:**

1. Arduino UNO
2. 7-Segment Display (Common Cathode)
3. Push Button
4. Resistors (220Ω)
5. Breadboard, Jumper Wires and battery
6. Buzzer

**Working Principle:**

When the push button is activated, Arduino outputs a random number from 1 to 6 with the beep of buzzer.

The number is output to the 7-segment display.

The generation of numbers employs Arduino's random() function, and output for display is handled by turning on the proper segments.

