Objective

To design and implement a numeric keypad circuit using buttons, encoder, a decoder integrated circuit (IC), and a 7-segment display.

Methodology

1.1 Cost and Materials

Price	Materials	Quantity	Specification
25	7-segment display	1 piece	Common Anode
25	74LS32	1 piece	Quad-Output, Two-Input OR gate
18	74LS04	1 piece	Quad-Output, One-Input NOT Gate
55	74LS147	1 piece	10 -to-4 Line Priority Encoder
55	74LS194	1 piece	4-bit Bidirectional Universal Shift Register
55	74LS4511	1 piece	BCD-to-Seven Segment Decoders
1	Resistor	11pieces	(10 pcs-470 Ohms; 1pc-1k Ohms)
8 / meter	Telephone wire	5 meters	
Salvaged	Power Source	1 piece	5 volts

Schematic Diagram (Proteus)