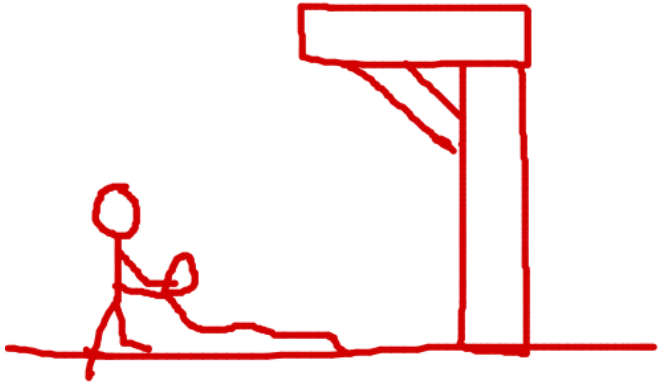

Hangman Game

Digital Logic Design (EE-221)

Group Members

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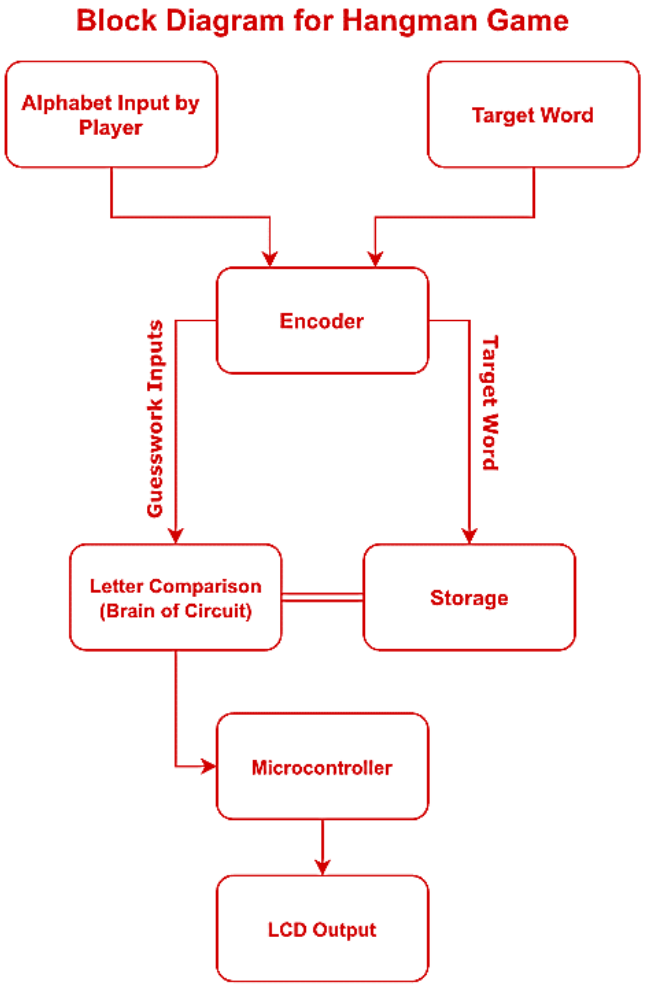
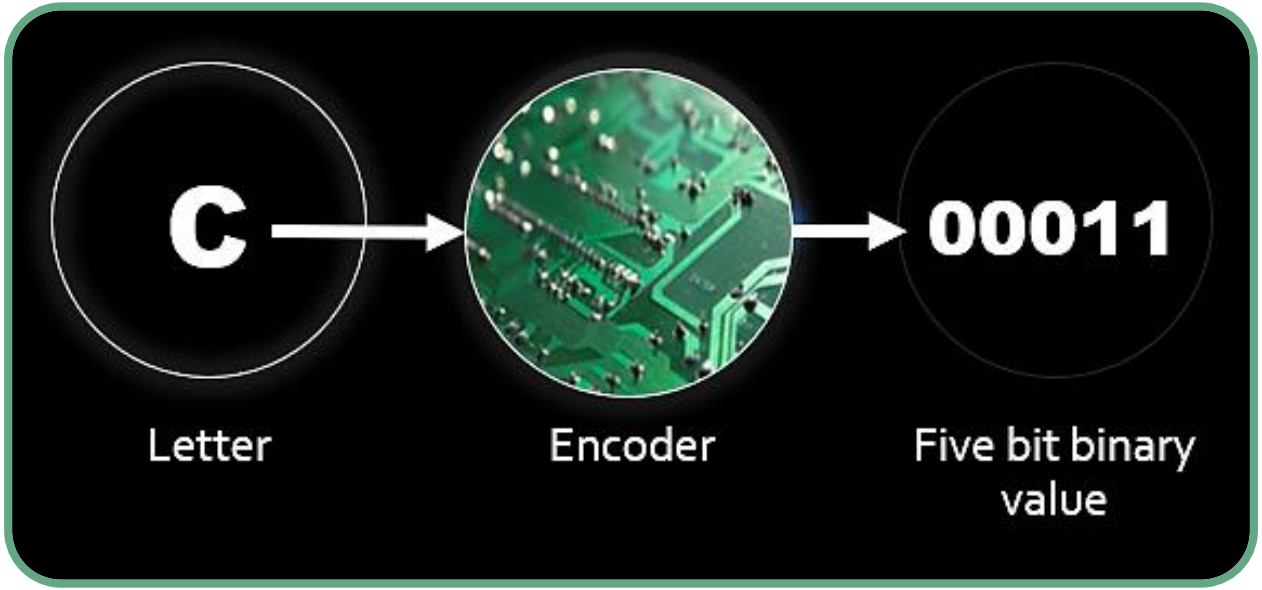
Introduction

- Hangman Game – A Brief Overview
- A Game of Guesswork
- Total Number of Tries = 2 * Total Characters
- Relation with Digital Logic Design

Pipeline

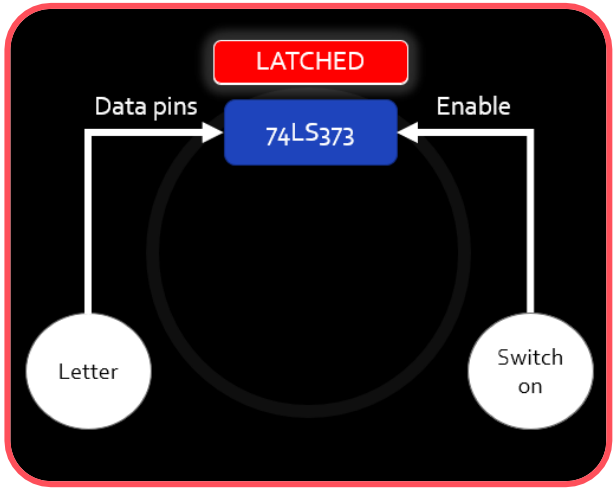

Block Diagram for Hangman Game
Alphabet Input by Player
Target Word
Encoder
Guesswork Inputs
Target Word
Letter Comparison (Brain of Circuit)
Storage
Microcontroller
LCD Output

Design: Encoder

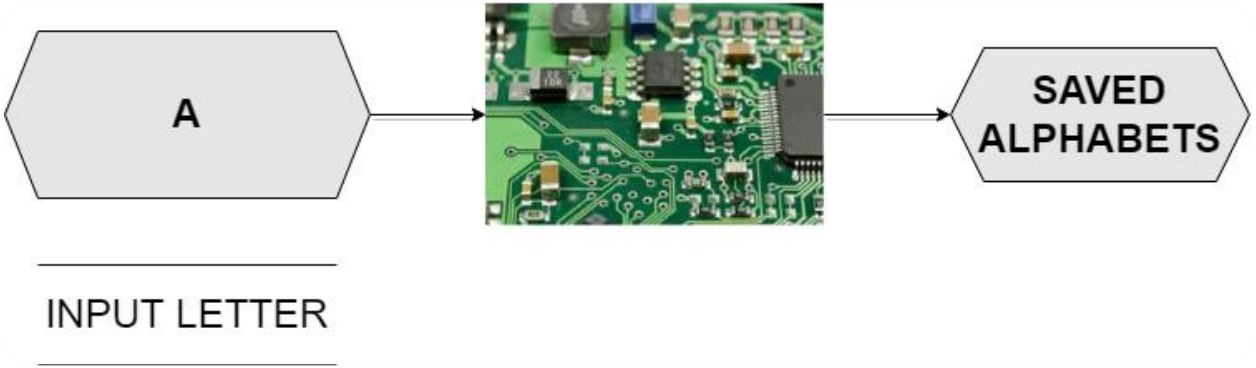


Design: Storage

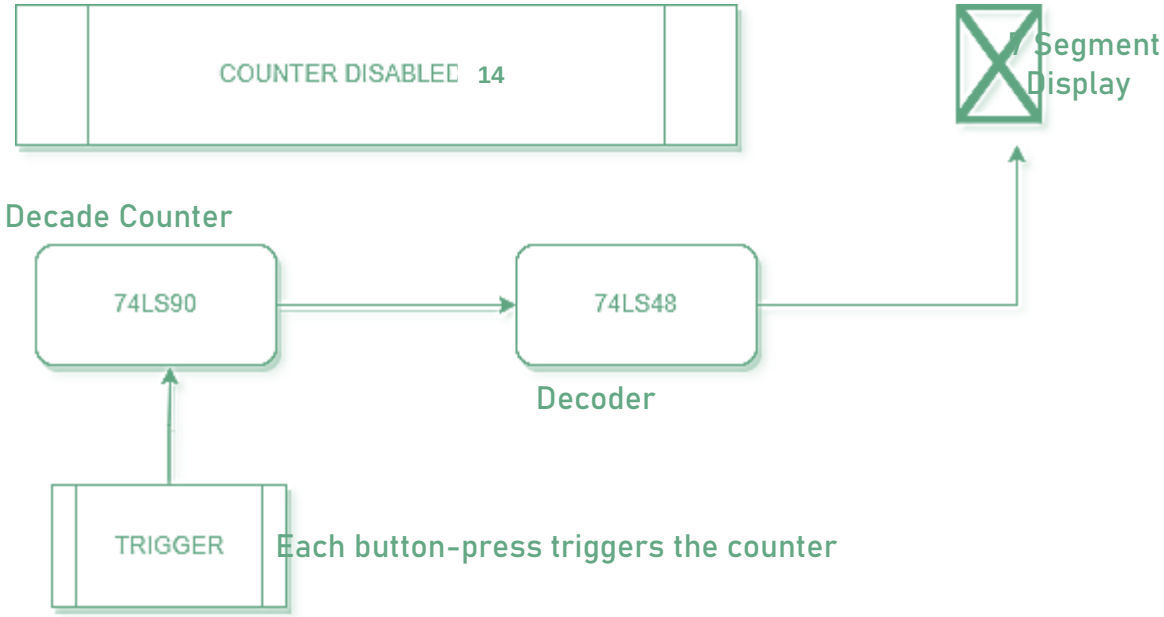
- Latches were used to store the target word
- Each word has 7 alphabets
- Each alphabet is encoded into 5 bits



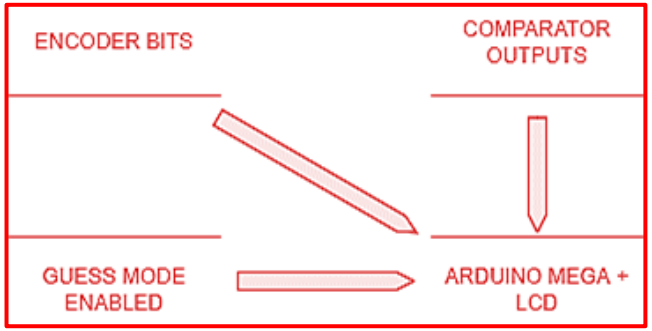
Design: Comparator

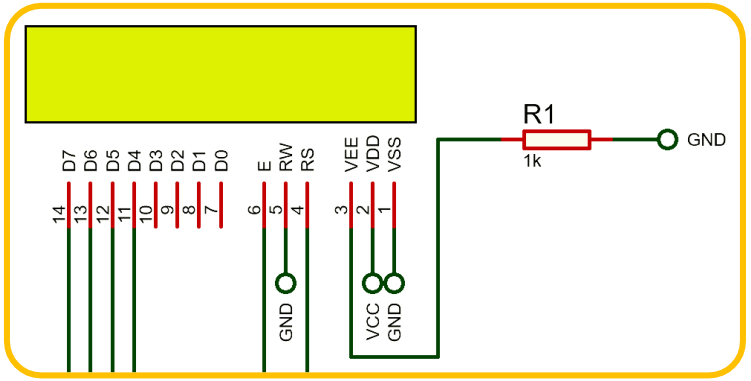


Design: Counter



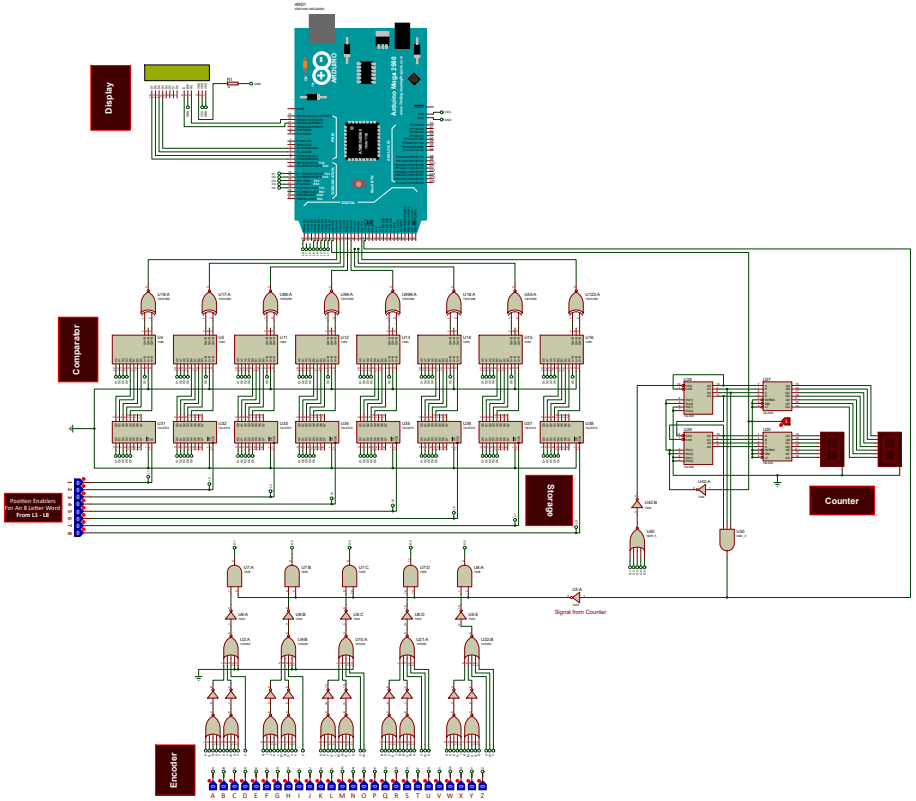
Design: LCD Display





16x2 LCD

Simulation


Display
Comparator
Position Enablers
For An 8 Letter Word
From L1 - L8
Six-e8ght
Counter
Signal from Counter
Encoder
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Issues Encountered

- Issue of Voltage Levels of Signals
- Issues in Individual ICs
- 74LS Family Open Characteristics
- Difficult to Debug

Conclusion

- The Gap between Implementations and Simulations
- Learnt Practical Applications of Digital Logic
- Learnt the Art of Debugging Complex Circuits
- Learnt Digital Logic Design, copium


Demo!