

Project Title:

Semester Project: Digital Logic Design

Course: BEE-12CD

Teacher:

Submitted by:

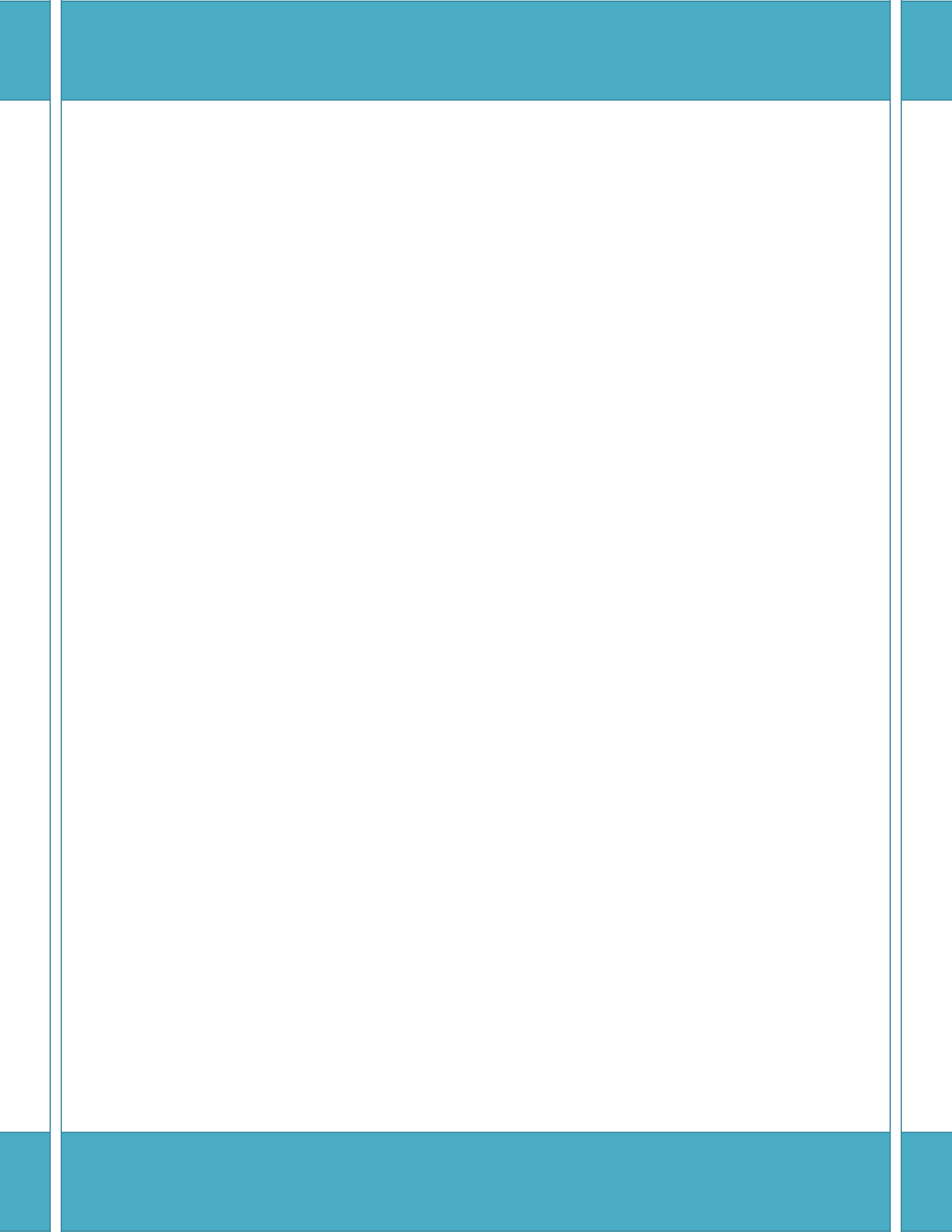
Name with Reg No. -----

Name with Reg No. -----

Name with Reg No. -----



National University of Sciences and Technology (NUST)
School of Electrical Engineering and Computer Science



Dedication

Acknowledgements

Abstract

One-page abstract of the project.

List of Figures:

Figure 1: Block Diagram	2
Figure 2: Detailed Circuit Diagram	2
Figure 3: Truth Table for My Design Combinational Part	3
Figure 4: Map Simplification.....	4

Table of Contents

Contents

Chapter 1: Introduction	1
1. Overview of Project	1
2. Block Diagram of Complete System (without using ICs, just use simple blocks)	2
3. Clear Work Division	2
Chapter 2: Design	3
1. Problem Statement	3
2. Truth Table / State Diagram	3
3. State Table If Applicable	4
4. Simplification of Functions / K-Maps & Equations	5
5. Complete Logic Diagram	6
6. Simulation If Required	7
Chapter 3: Hardware Implementation	8
1. Schematic Diagram	8
2. Index of ICs used	9
3. Details of Other Components used like diodes, transistors, resistors etc.	9
4. Hardware Issues / Results/ Observations	10
Chapter 4: Project Applications Further Suggestions (Optional)	11
Chapter 5: Future Recommendations	12
References / Bibliography	13
Appendix: Manufacturer's IC Data Sheets	14

Chapter 1: Introduction

1.1 Overview of Project

Give a one-page brief description of Project over here. What would be inputs /outputs?
Combinational Design, Sequential Design?

1.2 Block Diagram of Complete System (without using ICs, just use simple blocks)

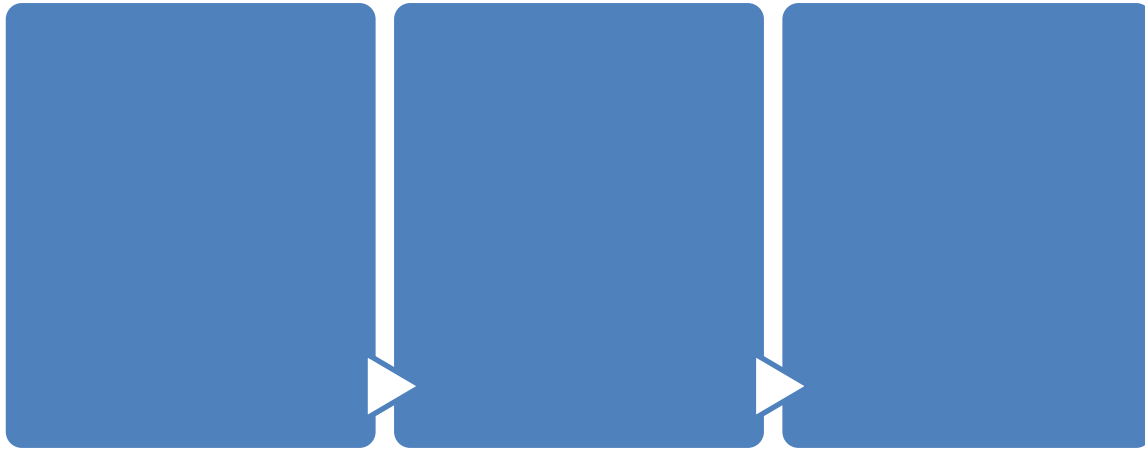


Figure 1: Block Diagram

1. Clear Work Division

Clearly describe the work of each member with the help of block diagram if possible. Or give a new figure illustrating work division



Figure 2: Work Division

Chapter 2: Design

2.1 Problem Statement

State the problem in a technical sense using the fundamentals of digital logic design.

2.2 Truth Table / State Diagram

Give the truth table/ state table/ State diagram in a standard format. Use the standard font size. Make a neat state-diagram; Do not Copy-Paste it.

Figure 3: Truth Table for My Design Combinational Part

2.3 State Table If Applicable

Give the state table in a standard format.

Reduce State-table if applicable.

2.4 Simplification of Functions / K-Maps & Equations

Give the K-maps in a standard table format. Again, do not copy-paste it. Use consistent font.
Edit equations using a standard format.

2.5 Complete Logic Diagram

Give a complete logic diagram here. First, try to make a logic diagram in some Simulation Software like Proteus or Multisim. If the components you are using are not available in the software, then make a diagram that is of a standard/consistent format.

2.6 Simulation If Required

If you have done any simulation, place the screenshots at different instances.

Chapter 3: Hardware Implementation

3.1 Detailed Schematic of Design and its Description

Draw the schematics of your design using Proteus or otherwise. Using the Pin numbering, IC numbers. Give the numbers of ICs used as well. List all the components like resistors, diodes etc.

3.2 Details of ICs used

a. 7400 Series

74AS00 Quad 2- input NAND gates

b. Other ICs

4002B Dual 4-input NOR gates

3.3 Details of Other Components used like diodes, transistors, resistors etc.

3.4 Hardware Issues / Results/ Observations

Give some of your observations about hardware implementation, any errors you encountered.

Chapter 4: Project Applications

Give some Project Applications

Chapter 5: Future Recommendations

Give some future recommendations to improve you project

References / Bibliography

Give References of different datasheets, theoretical background, books, sites you consulted in square brackets.