HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF COMBINATIONAL & SEQUENTIAL CIRCUITS

E.1150

BY: PALESHIS YIANNAKIS

JUNE 1998

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by
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Introduction

Introduction

This project was carried out with the purpose to fulfill the following objectives:

1. To present a standard procedure for the design of combinational circuits
2. To present a standard procedure for the design of sequential circuits
3. To present a design for each case
4. To construct a working circuit for one of the two cases

The study consists of a detailed investigation of the basic theory of logic design. Initially logic gates and other combinational parts, along with the procedure of designing a combinational circuit is presented. The knowledge obtained on combinational circuits allowed us to continue with the more complicated sequential circuit, which again is investigated and presented in this study.

Finally, the overall study on logic design results to a practical procedure for designing and constructing logic circuits.