TOUCH SCREEN GLCD BASED ELECTRICAL DEVICES CONTROL SYSTEM

By:

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I.D# 081220096

Session 2008-2012

SCHOOL OF SCIENCE AND TECHNOLOGY

UNIVERSITY OF MANAGE MENT & TECHNOLOGY,

LAHORE

A PROJECT ENTITLED

TOUCH SCREEN GLCD BASED ELECTRICAL DEVICES CONTROL SYSTEM

SUBMITTED TO:

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IN

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BY

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Project completion certificate

Certified that the project work contained in this project title **"Touchscreen GLCD based electrical devices control system"** has been carried out and completed by **M. FAROOQ MASOOD, I.DNo: 081220096** under my supervision during his studies for BS (Hones) in electrical engineering.

Dated: Advisor:

Mr.Nauman Ahmad

Submitted through:

Dr.Sajjad Shami

Chairman,

Department of electrical engineering

University of management and technology

DECLARATION

I, M.Farooq Masood I.D # 081220096 student of BS(Hons) Electrical engineering session (2008-2012),Hereby declare that the matter presented in the project report entitled:

"***Touch Screen GLCD Based Electrical Devices ControlSystem***" is my own work & has not been printed,published & submitted as research work, in any university,research institution, in Pakistan or abroad.

Sig. Advisor: **Sig.Deponent**

Mr.Nauman Ahmad **M.Farooq Masood**

DEDICATION

To My Mother **Rashida Khatoon** who provided me a full opportunity to devote myself to my studies, and whose love, affections, prayers and support always kept me enthusiastic about my future**.**

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Abstract

The purpose of this project is to control electrical devices more efficiently& effectively with the help of "**Touch panel GLCD**".It is a user friendly project. In this project I have explored the idea of reliable, simple ,efficient touch panel to control different electrical devices using PIC microcontroller.Loads to be controlled are light,bulb & fan. Also using IR for sending & receiving codes in bit format providing remote control feature,though user can control these devices remotely.

Acknowledgement

I humbly bow my head before **ALMIGHTY ALLAH** to give me courage to represent this piece ofwork and who always guides me in times of sorrows and distress, who never spoils any of my efforts.With millions of salam to the Holy Prophet **HAZRAT MUHAMMAD (PBUH),** who is theblessing of all mankind**,**Who enlightened the world with beacon of knowledge

I owe my special thanks to my advisor **Mr.Nouman Ahmad** who was really supporting andencouraging throughout my research work.Further, I am thankful to the chairman department of Electrical Engineering for providing me the environment project research.Furthermore, many thanks to all my teachers who guided me through my stay at the university.

I am greatly thankful to my parents, especially to my Father **Ch. Masood-up-Asar (Late)** whose prayers and positive concern towards my studies encourage me and developed a lot of confidence to face any type of challenge with courage and bravery.

Special thanks must go to my siblings and to my friends who supported me in this project, I cannot forget their support, encouragement and collaboration to complete this work.

University of Management & Technology **,** **Muhammad FarooqMasood.**

Lahore.

Chapter 1

Introduction

The project mainly aims in designing completely automated switch board with the help of **touch screen sensor** and a **GLCD** to control the house hold appliances and also provideea. user friendly environment of the user to operate the devices effectively. It majorly aims in providing a reliable system for old peoples who find difficulty in operating few electrical devices.

Automation is the most frequently spelled term in the field of electronics. The hunger for automation brought many revolution in the existing technologies.one among the technologies which had greater development, it is **touch screen sensor**. These had greater importance than any other technologies due to its user friendly nature.Touch screen based devicescan be easily reachable to the common man due to its simpler operation, and the same time it challenges the designer of the device. These touch screen sensor can be used as a replacement of the existing switches in the home which produces sparks and also results in fire accidents in few situations.considring the advantages of touch screen sensor an advanced automation system was develop to control the appliances in the house.

The devices consist of **microcontroller**, Which is interfaced with the input and output modules, the controller acts as an intermediate medium between both of them.so the controller can be term as a control unit.The input modules is a touch screen sensor,which takes the input from the user and fed it to the **microcontroller**.the output module is a **GLCD** and the devices to be controlled. Here the **microcontroller** receives the input from touch sensor and switches the devices with respect to the input.

1.1. Block diagram

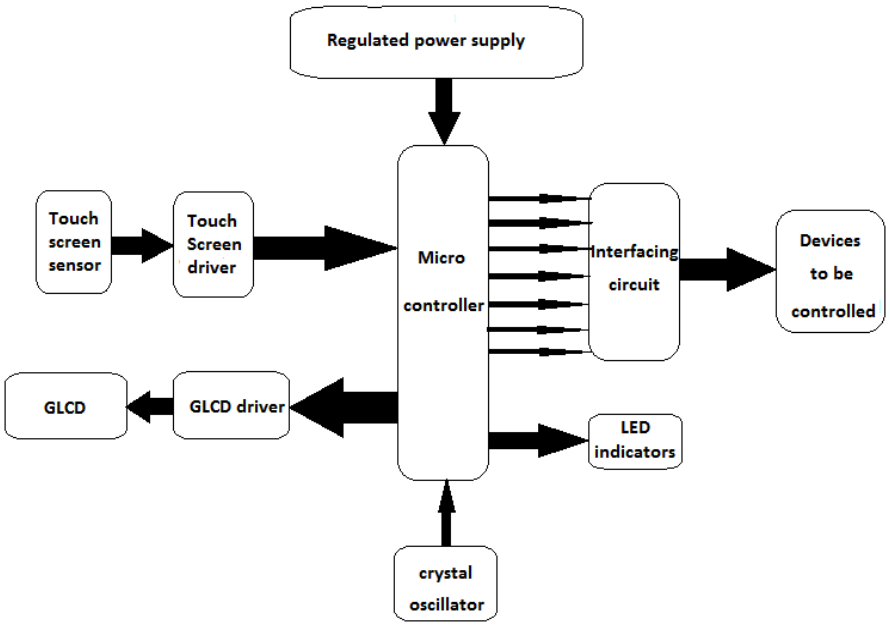

Fig:1.1 ProjectBlock diagram

1.1.1.Description

The above block diagram consist of five major building blocks like microcontroller, regulated power supply, touch screen sensor, GLCD, and interfacing circuit. Microcontroller role is to control all the inputs which comes from touch screen sensor and after taking the input from touched area, process this input, and do operation only that area on GLCD upon which touch is pressed. Driver circuits are always between input/output devices and microcontroller,Which actually provides stabalize input to the microcontroller.Regulated power supply is an essensial part of any project so this project operates on 12V regulated power supply.Interfacing circuits provides connection between devices to be control and microcontroller through some component like ULN2003,which provide current amplication.