

A
Project Report
On
“PROGRAMMER’S KEYBOARD”

Submitted to
CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY

BHILAI

in partial fulfillment of requirement for the award of degree

of

Bachelor of Engineering

In

Computer Science & Engineering

By

ANNIM BANERJEE

RISHABH SHARMA

SRIJAN TIWARI

Under the guidance of

Mr. Saket Soni

Assistant Professor, CSE Department



Department of Computer Science & Engineering

Chhatrapati Shivaji Institute of Technology, Durg

Shivaji Nagar, Balod Road, Kolihapuri, Post Pisegaon – Durg (C.G.)

491001

Session: 2012 - 2013

DECLARATION

We undersigned solemnly declare that the report of the project work entitled “**PROGRAMMER’S KEYBOARD**” is based on my own work carried out during the course of my study under the supervision of **Mr. Saket Soni**.

We assert that the statements made and conclusions drawn are an outcome of the project work. We further declare that to the best of my knowledge and belief that the report does not contain any part of any work which has been submitted for the award of any other degree/diploma/certificate in this University or any other University.

(Signature of the Candidate)

ANNIM BANERJEE

Roll No. : 3032209112

Enrolment No.:AF4368

(Signature of the Candidate)

RISHABH SHARMA

Roll No. : 3032209121

Enrolment No.:AF4406

(Signature of the Candidate)

SRIJAN TIWARI

Roll No. : 3032209092

Enrolment No.: AF4257

C E R T I F I C A T E

This is to certify that the report of the project submitted is an outcome of the project work entitled “**PROGRAMMER’S KEYBOARD**” carried out by

ANNIM BANERJEE **Roll No. : 3032209112** **Enrolment No. : AF4368**

RISHABH SHARMA **Roll No. : 3032209121** **Enrolment No. : AF4406**

SRIJAN TIWARI **Roll No. : 3032207092** **Enrolment No. : AF4257**

carried out under my guidance and supervision for the award of Degree in Bachelor of Engineering in Computer Science & Engineering of Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.), and India.

To the best of my knowledge the report

- i) Embodies the work of the candidate themselves,
- ii) Has duly been completed,
- iii) Fulfills the requirement of the Ordinance relating to the BE degree of the University and
- iv) Is up to the desired standard for the purpose of which is submitted.

(Sign of Head of Department)

Mr. OM PRAKASH YADAV

Associate Professor, CSE Department

(Signature of the Guide)

Mr. SAKET SONI

Assistant Professor, CSE Department

The project work as mentioned above is hereby being recommended and forwarded for examination and evaluation.

(Signature of Principal with seal)

Chhatrapati Shivaji Institute of Technology, Durg

Shivaji Nagar, Balod Road, Kolihapuri, Post Pisegaon – Durg (C.G.) 491001

CERTIFICATE BY THE EXAMINERS

This is to certify that the project work entitled

PROGRAMMER`S KEYBOARD

Submitted by

ANNIM BANERJEE Roll No. : 3032209112 Enrolment No. : AF4368

RISHABH SHARMA Roll No. : 3032209121 Enrolment No. : AF4406

SRIJAN TIWARI Roll No. : 3032209092 Enrolment No. : AF4257

has been examined by the undersigned as a part of the examination for the award of Bachelor of Engineering degree in Computer Science & Engineering of Chhattisgarh Swami Vivekanand Technical University, Bhilai.

Internal Examiner

Date:

External Examiner

Date:

A C K N O W L E D G E M E N T

It is a matter of privilege and pleasure to record our deep indebtedness and warm gratitude to our esteemed Guide **Mr. SAKET SONI (Assistant Professor, COMPUTER SCIENCE & ENGINEERING DEPARTMENT)** for his inspiration, keen interest and constructive criticism at every stage of work. It was an especially valuable asset for us to have him as our project guide. Without his incredible help coupled with valuable suggestions and relentless efforts, this would never have been successful task.

We are deeply grateful to our esteemed **Mr. OM PRAKASH YADAV, HEAD OF DEPARTMENT (COMPUTER SCIENCE & ENGINEERING DEPARTMENT), Dr. MAHESH PARAPPAGAUDAR, PRINCIPAL, CHHATRAPATI SHIVAJI INSTITUTE OF TECHNOLOGY, DURG (C.G), Mr. AJAY PRAKASH VERMA, CHAIRMAN, CHHATRAPATI SHIVAJI INSTITUTE OF TECHNOLOGY, DURG (C.G)** for providing all the facilities, at every stage, which were very essential for the completion of this project.

And lastly we wish to express our thanks to all our parents, fellow students and those who have directly or indirectly helped us during this project.

(Signature of the Student)

ANNIM BANERJEE

(Signature of the Student)

RISHABH SHARMA

(Signature of the Student)

SRIJAN TIWARI

List of Tables

Table No.	Table Name	Page No.
6.1	Encoder logic Truth Table	41

List of Figures

Figure No.	Figure Name	Page No.
3.1	Matrix Keypad connection with microcontroller	11
4.1	Crystal schematic for MCU enabled to use the on-chip program-data memory	17
4.2	Matrix keypad connection with microcontroller schematic	18
4.3	Schematic of USB-UART bridge converter. FT232RL.	19
4.4	8051, ARM7 programmer	20
4.5	Circuit Layout of controller board	21
4.6	Schematic sketch of matrix keypad	22
4.7	Layout of matrix keyboard: TOP layer.	22
4.8	Layout of matrix keypad: BOTTOM Layer.	22
4.9	FlashMagic application window	29
4.10	The ResEdit window	31
4.11	Programmer's Keyboard application window	31
4.12	Control Flow diagram	34
5.1	Keyboard: TOP layer	35
5.2	Keyboard: BOTTOM layer	35
5.3	Controller board TOP layer	35
5.4	Assembled and packed keyboard	36
5.5	Packed Keyboard	37
5.6	Programmer's Keyboard window developed in DOT.NET framework.	37
6.1	Block diagram of encoder logic	40

List of Abbreviation

Abbreviation	Meaning	Page No.
PC	Personal Computer	1
μC	Micro Controller	2
μP	Microprocessor	2
FCC	Federal Communication Commission	4
USB	Universal Serial Bus	8
RF	Radio Frequency	8
DIY	Do it yourself	12
MCU	Micro controller unit	14
LED	Light emitting diode	15
PWB	Printed writing board	15
TTL	Transistor-Transistor Logic	19
PCB	Printed Circuit Board	21
CAD	Computer Aided Design	21
UART	Universal Asynchronous Receive and transmit	24
IDE	Integrated Development Environment	30
COM	Communication	30
UI	User Interface	30
GUI	Graphical user Interface	32
OS	Operating System	33
HDD	Hard Disk Drive	36
DTR	Detect to ready	44

Abstract

This project is all about to create such a keyboard this is very useful for a coder or say, useful for a programmer's point of view. This project allows a programmer to have all the general features of keyboard, along with that some more features are added which can help a programmer to have quick with its task using our keyboard. Features of this keyboard are as follows:

- Auto completion of code snippets.
- On the basis of Language.
- Irrespective of Language.

User will select or set the configuration for using this keyboard to get the code snippets on window.