

Chhatrapati Shivaji Institute of Technology, Durg

Computer Science & Engineering Department

Semester – 8th

Section - B

Programmer's Keyboard

Major Project Presentation

Presenting a brief idea of our project, proposed by

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Abstract

Programmer's Keyboard: Abstract

- Designing and building of a *keyboard* with those feature which helps in speeding up the programmer or say to coder to do coding on the respective IDE editor window.



Introduction

Programmer's Keyboard: Introduction...

- This project is partly based on embedded systems and rest of the part is software based.
- Special key sets are provided which are dedicated to do specific task.
- This project is been developed keeping the programmers as our audience.
- For now, this will be developed for windows platform.

Programmer's Keyboard: Introduction...

- This project will not be developed as per IEEE, FCC(Federal Communication Commission) Electronics specification.
- This keyboard will have a USB interface to connect with your system.
- A software will be developed further for rendering this keyboard from your system.
- That software will reside on computer system.



Application & Feature

Application & Feature...

- Application

- Auto Completion of the coding snippets for you on the IDE you are working at that instant, as per the given functionality on the key you pressed.
- You can choose the language which you are working on with from tray icon area, then this will put the snippets on the window for the same.
- Another category, irrespective of the language you are working with, just select the code snippets you want to use.

Application & Feature...

- Hardware Features
 - 20-30 keys on board.
 - USB interface for communication with the computer system.
 - Controllers on option
 - NXP: 8051.
 - Atmel: ATmega168/328
 - May have a fancy hardware design.
 - Power will be taken from computer via USB.

Application & Feature...

- **Software Features**

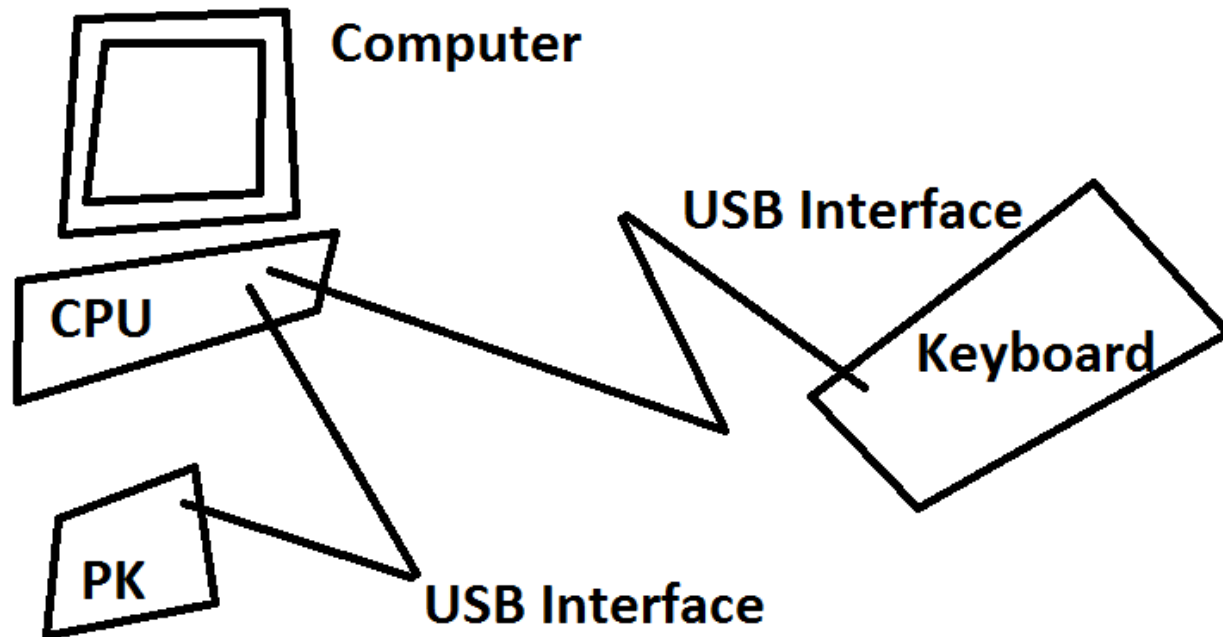
- Will process the data which comes from the keyboard via USB communication port.
- Application may be running on Notification Tray. From here, you can select the working language choice, or can select the snippets directly.
- May be a windowed application but not a full fledged one.
- Without this application running on the system, you cannot use the keyboard.
- A driver software is required for communication with this keyboard.



Working and Methodology

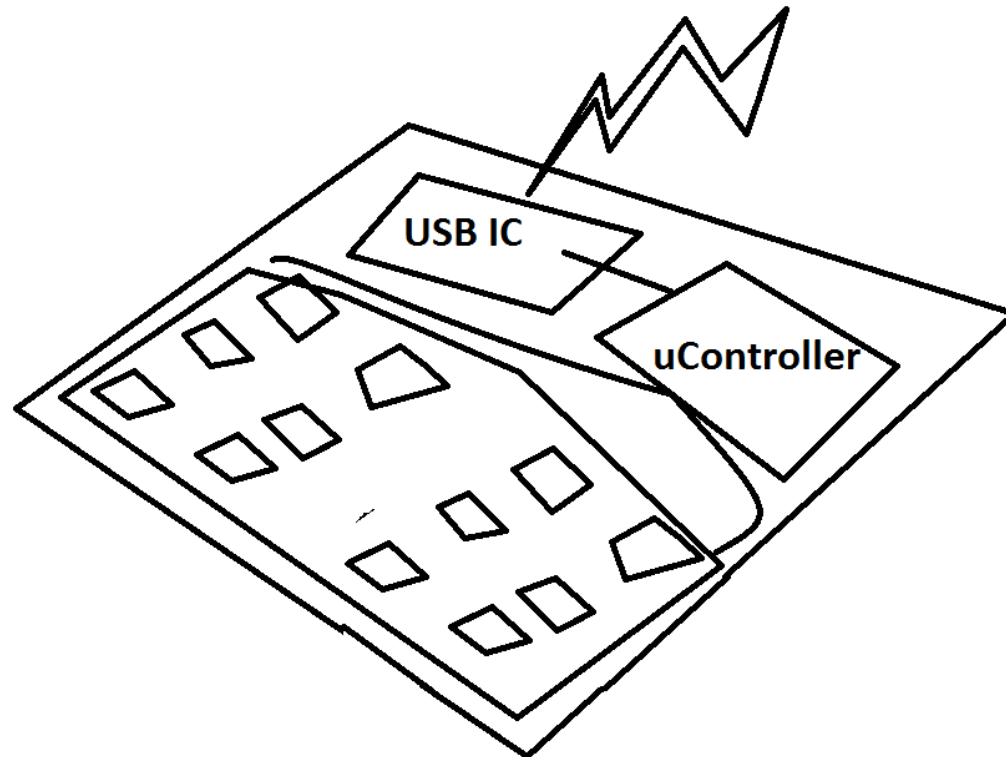
Working and Methodology

- A setup of our keyboard with computer system.



Working and Methodology

- Magnified view of our keyboard which gets connected to Computer...





Requirements

Programmer's Keyboard : Requirements

- Software Development Requirements
 - C++ (using WinAPI).
 - Visual Studio Express Edition 2010.
 - SDCC(Small Device C Compiler) compiler for embedded C programming on the micro controller.
 - Flash Magic program for burning the code on to micro controller.

Programmer's Keyboard : Requirements

- Hardware Development Requirements
 - Breadboard.
 - Hookup Wires.
 - Multi meter.
 - 4 pin keys.
 - Microcontroller for development.
 - USB interface module breakout.
 - Matrix Keypad.

References

- Internet & Books

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Thank You