

## CENG 491

### Senior Design Project Proposal

**Company Name :** Yaya Bilişim

#### **Members of the Team**

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#### **Project Topic :**

Our main concern is related with Embedded Systems . We will develop a software emulator, compiler and development environment for the card used in CEng 336 course. This card includes two PIC processors and various interfaces like LCD, Parallel, Serial, USB ports, smartcard reader, LED's etc. We aim to provide users an environment where they can compile , upload , debug their programs to the card by using our application . And also users can test their programs without using the real card via our software.

#### **Possible Application Areas :**

Embedded systems are used in a wide area including education, military , health, culture , art , sports , white goods ; briefly many technological devices are based on embedded systems .

By our DEVEMB project users will be able to simulate the applications written for these devices without using the real devices . This is an economical benefit for the companies that uses the software.

## **Initial Ideas For the Project :**

There are many microcontrollers and almost all of them have their own evaluation cards. This constitutes a must for developing softwares for these devices. But, there are not many of these softwares that enables simulation of these devices. For instance it is not possible to simulate every application by using MPLAB software, or you may encounter some bugs in ISIS software. We are planning to provide an environment which is more stable, containing less bugs, more general, and hardware free. And there is another fact that there are not much embedded systems software written for Linux operating system. We are aware of this and considering the probability of writing the software for Linux operating system.