

ABSTRACT

Wil Vantri.S (5173131026) : Development of Microcontroller Trainer in the Subject of Microcontroller and Microprocessor for Class XI TEI Students of Vocational High School 1 Bandar Masilam.

The era of globalization is a comprehensive event of change. The impact of globalization can be felt from developed countries to developing countries in the form of investment, trade, technology and culture. The rapid growth of computer technology is one of the impacts of globalization. Computer technology can be applied in various human life needs, for example in the field of education such as learning media and learning resources.

A microcontroller is a chip in the form of an IC (Integrated Circuit) that can receive input signals, process them and provide output signals according to the program that is fed into them. The input signal of the microcontroller comes from the sensor which is information from the environment while the output signal is intended for the actuator which can have an effect on the environment. So in simple terms, a microcontroller can be likened to the brain of a device/product that has the ability to interact with the surrounding environment.

A microcontroller is basically a computer in a single chip, in which there is a microprocessor, memory, Input/Output (I/O) lines and other complementary devices. The data processing speed on microcontrollers is lower when compared to PCs. In PCs, the speed of microprocessors used today has reached the GHz order, while the operating speed of microcontrollers generally ranges from 1 to 16 MHz.

For the media trainer requirements test data , it can be concluded that this media trainer is very feasible as seen from the results of the media trainer requirements test by 1 media expert and 16 students who found that the score of the media expert, namely Mr. Muhammad Iskandar, was 98% and the average score of 16 students was 98.19%. Furthermore, to calculate the average percentage of scores from media experts and the average score of 16 students is by adding the two percentages and then dividing them, then the average percentage score is 98.1%.

Keywords: Trainer Development, Microcontroller Engineering, Microcontrollers and Microprocessors

