

## **ABSTRACT**

*In doing a visual identification, humans use their eye as the main senses to identify object, but the eye has its limitations. Limitations of the eye as a visual identification are endurance and fatigue, although this time humans have developed a visual identification too, in this final project this system is called as vision system. In the existing system there are still shortcomings. Automation of visual identification system have weaknesses that this system is not flexible enough to develop and use components that are not compatible.*

*In this study we will design a device to visually identify the object of two dimensions by using Eigenface algorithms and simulate it using MPS (Modular Production System). with this system user allows to user not depend on a particular company who made the visual identification components that he used. and can also be extended to other functions. The system will be designed to be able to separate the two-dimensional objects namely circular box, circle and box selection is to represent the form of objects that have corners and objects that have the arch.*

*The study was preceded by identify the system, once the system is complete, after that Manufacturing system design begins with make identification program using visual basic applications, making the database as the storage medium identification result and a variety of data about the object identified. After that the main interface or Human Machine Interface design is performed using Intouch Application, after the interface has been made then we make Ledder Diagram, to design charts produced using the CX-Programmer. To test whether the system can work, we use the Modular Production System to simulate system.*

*This system was tested using the Modular Production System, from the results of experiments performed a system that has successfully made a visual identification and also separates the object based on their shape.*

### **Keywords**

*Vision System, Visual identification, Eigenface Algorithm*