

## **ABSTRACT**

*The development of technology in the digital era as it is currently developing very rapidly, including in the industrial sector. Currently the industrial sector has applied the concept of Industry 4.0. In order to be able to participate in realizing industry 4.0 Telkom University prepares its students by providing learning and facilities in the form of bottling plant simulators. The bottling plant simulator has implemented one of the industry supporting technologies, 4.0, which is the human machine interface. However, users have difficulty in operating the HMI, which is caused by several factors including the interface aspect of the information displayed incomplete, the colors used are not attractive and rigid, from the aspect of information the system does not have a database, other than that the HMI is embedded directly in the bottling plant so monitoring and controlling cannot be done remotely. Under these circumstances, it is necessary to do repairs. The waterfall method is a systematic and sequential model of information system development. This method is suitable for the design of HMI, because it has a system acceptance value large enough so that it can be well received by the user. The designed HMI is a web-based HMI that utilizes an internet connection. After testing the design of the HMI that has been made, the results show that the controlling and monitoring functions carried out by the HMI on the bottling plant simulator via PLC have a delay of 1, 11 seconds.*

**Key Words : Industry 4.0, Human Machine Interface, Waterfall Method.**