

## **ABSTRACT**

*Adorable Projects is a company engaged in women's fashion that stores its products in Adorable Projects' private warehouse. In handling the warehouse, Adorable Projects is still experiencing obstacles in every activity that causes unfulfilled demand from each period due to actual cycle times that exceed the existing standard cycle time. The cause of the actual cycle time that is longer than the standard cycle time is the high storing and order picking time caused by the goods in the warehouse are still stored randomly.*

*In an effort to overcome these problems, a proposed design of goods deviation is carried out which will later use the help of simulation tools. The first step is to identify goods and classify them using Classed-Based Storage to find out the goods with the highest priority value. The next step is to calculate the distance between shelves to find out the closest distance to the picker location and also to find out the location of the proposed goods after being classified. And the last step is to create a simulation model using Anylogic software to determine the comparison of the actual average total cycle time with the average total cycle time proposed by considering several control variables.*

*After making the comparison, a 21% decrease in the average total cycle time will be obtained, where the average total proposed time has decreased to 63.38 minutes from the actual average cycle time of 80.45 minutes.*

**Keyword :** Warehouse, Cycle time, Simulation, Classed-Based Storage