

## **ABSTRACT**

*PT XYZ is a company engaged in publishing and printing in West Java. In carrying out its production process, PT XYZ implements scheduling with flow shop system. In March 2022, there were 16 book orders at PT. XYZ. Of the 16 book orders at PT. XYZ, there are 4 orders that can be fulfilled according to the due date of the order, while the other 12 orders cannot be fulfilled according to the due date so that the order is late. To be able to find out the root causes of delays in fulfilling orders at PT XYZ, identification is carried out using a fishbone diagram. Based on the factors that have been obtained from the results of problem identification using the fishbone diagram method, this research focuses on problem solutions from method factors. In the existing scheduling with the First Come First Serve (FCFS) method, the resulting makespan value is 2691.97 minutes. In the proposed scheduling with the Campbell Dudek Smith (CDS) algorithm methods, the resulting makespan value is 2622.21 minutes. Based on the results of existing and proposed scheduling, there is a reduction in the makespan value when using the proposed scheduling with a reduction value of 69.96 minutes or 2.6%.*

**Keywords - Delay, Scheduling, Minimization, Makespan, Algorithm**