

## **ABSTRACT**

PT. XYZ is one of the material coating services. The main raw material in the production process of PT. XYZ is the material. PT conditions of material management. XYZ is currently only uses an average of the materials used in the previous month to forecast demand in the next month. PT. XYZ is still often have a shortage of raw materials in serving the needs of customers. In addition the company is still using Microsoft Office Access and Microsoft Office Excel 2003 and have not been integrated between one part with another part. The system also does not have a warning if the material in the warehouse must make a reservation and must report to perform data collection first.

Inventory model of a simple probabilistic model of inventory management in accordance with the pattern of corporate data and can help overcome the problems experienced by PT. XYZ at this time. PT. XYZ also requires an integrated data management system and can support the company's inventory management processes. development of information systems that can support the company's performance using the waterfall model of system development. In addition to this study system design using UML.

System designed in this study may provide material management forecasting a one-year anniversary comes at a time coming when the stock has touched the material in the warehouse reorder point limit, as well as equipped with the management of inventory taking. Besides the integrated system has been designed with the penjumlahan, parts warehouse and the PPIC and the warehouse manager can monitor the current conditions. The system also comes with reporting that can be accessed quickly and accurately.

**Keywords :** Inventory, simple probabilistic inventory model, waterfall model, UML.