Lab 3 Summary – Production Planning and Execution Process

Objective : In this lab, I learned how to complete the full production planning and execution process in SAP S/4HANA using the Global Bike dataset. The goal was to experience the end to end manufacturing cycle from demand forecasting and production planning to the confirmation of finished goods and cost settlement. Through this exercise, I could see how the Production Planning (PP) module connects with Materials Management (MM) and Financial Accounting (FI) within one integrated system.

1. Change Material Master Record
I updated the material master for the Deluxe Touring Bikes (black, silver, and red) by modifying the MRP 3 and Forecasting views. I entered strategy group 40 (Planning with final assembly) and set forecasting parameters such as alpha, beta, and gamma factors to support future demand forecasting.

2. Change Routing
I adjusted the routing for the red Deluxe Touring Bike to make sure all components were correctly assigned to each operation step. For example, the frame and seat kit were linked to operation 0020, while wheels, chains, and brakes were assigned to later operations in the sequence.

3. Display Product Group
I reviewed the product group that included all three Deluxe Touring Bikes. The product mix consisted of 40% black, 30% silver, and 30% red bikes.

4. Create Sales and Operations Plan (SOP)
I created a 12-month sales and operations plan for the Deluxe Touring product group using historical consumption data. SAP automatically generated a forecast model that included both trend and seasonal patterns. I adjusted the target day's supply and synchronized production with forecasted sales.

5. Transfer SOP to Demand Management
I transferred the SOP to demand management so that the high-level plan could be broken down into individual material requirements for each bike model.

6. Review Demand Management
I reviewed the planned independent requirements for each bike to ensure that the system had created accurate production quantities and dates for future manufacturing.

7. Run MPS with MRP
I ran the Master Production Scheduling (MPS) process to create planned orders based on the requirements generated from the SOP. This allowed the system to calculate which materials needed to be produced and when.

8. Review Stock/Requirements List
I displayed the stock/requirements list to review available inventory, planned receipts, and requirements for the red Deluxe Touring Bike. Since there was no initial stock, SAP created planned orders to meet future demand.

9. Convert Planned Order into Production Order
I converted one of the planned orders into a production order. When the order was created, the system performed availability checks, generated reservations for required components, and calculated planned costs.

10. Receive Goods in Inventory
I posted goods receipt entries to add all necessary components (such as frame, seat kit, wheels, and chains) to the Dallas plant's inventory so that production could start.

11. Issue Goods to Production Order
I issued the required components to the production order using movement type 261. This reduced the raw materials inventory and recorded the consumption costs for production.

12. Review Production Order Status
I checked the production order status and verified that the order was released and costs were correctly assigned after the goods issue.

13. Confirm Production Completion
After assembly was completed, I confirmed the production order as finished and entered the yield quantity produced. This also triggered labor cost calculations and cleared any open reservations.

14. Receive Goods from Production Order
I posted a goods receipt for the completed Deluxe Touring Bikes using movement type 101. The finished goods were added to the warehouse stock under FG00 (Finished Goods).

15. Review Costs Assigned to Production Order
I analyzed the cost breakdown of the production order to compare actual versus planned costs. This included material consumption, labor, and overhead costs.

16. Settle Costs of Production Order
Finally, I settled the production order costs to the appropriate cost objects in Controlling (CO). This completed the financial side of the production process and allowed for variance analysis.

Result & Reflection
This lab helped me understand how production planning and execution work together in SAP. At first, it was challenging to keep track of all the steps from planning to cost settlement but seeing how each module interacted made the entire process clear. I learned how one production order triggers inventory movements, accounting entries, and cost postings automatically. By completing this lab, I gained a solid understanding of how SAP integrates PP, MM, and FI to manage manufacturing efficiently and accurately in real time.