

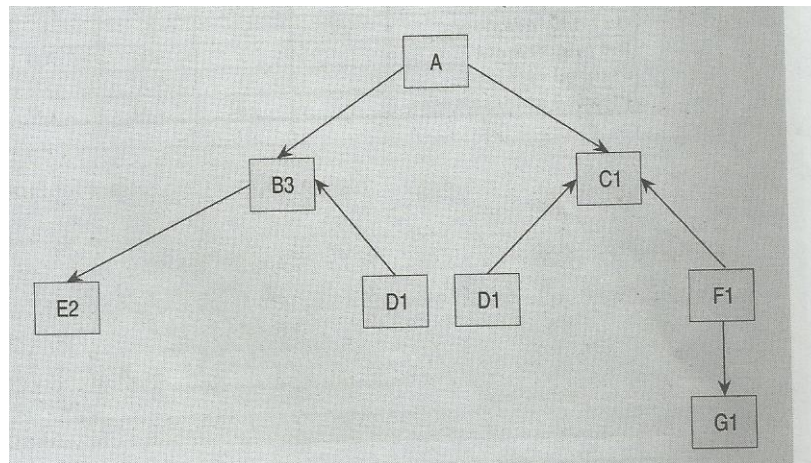
Case Study

Developing MRP for a Manufactured Product

A manufacturing organization needs to plan the materials required for the next six weeks for the manufacture of its end product –(Product A), as per a master production schedule. In addition to the end product, there is an independent requirement of component C, as it is sold as a spare in the market. The MPS for both the end product and the spares are given in the table below:

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Product A	100	150	200	100	0	200
Component C		50	60			70

In order to assemble one unit of product A, components B to G are required. The figure below shows the product structure:



In the figure, the number alongside each component denotes the number of each component required to assemble its immediate parent. An extract of the inventory shown below reveals the inventory on hand. There are no pending orders for delivery. Different lot-sizing rules are used for the components of product A. moreover the components have different lead times. All this information is available in the table below:

Component	On-hand	Lead Time	Lot size
A	150	1	LFL
B	1000	2	LFL
C	300	1	LFL
D	750	2	3 periods
E	700	6	3 periods
F	200	1	400
G	500	3	500

Perform an MRP exercise to estimate the quantity and timing of the components required for the manufacture of product A as per the MPS