IE 367
TERM PROJECT
(A BIG PICTURE!)

1. **Problem:**
   a. Deals with manufacturing three primary (end) products A, B, and C over a planning horizon of approximately 6 months (27 weeks) in order to meet the forecasted demands for these products at specific time periods.
   b. Takes into consideration the following:
      i. Bill-of-materials for end products.
      ii. Processing time requirements for end products and components on workcenters.
      iii. On-hand inventories and lead times for end products, components, and raw material.
      iv. Workcenter capacities and costs.
      v. Production, inventory carrying, and backordering costs.

2. **Analysis:**
   a. Requires a demand driven approach be used to analyze the problem.
   b. Both feasible and infeasible workcenter capacities have been considered.
      
      \[\Rightarrow\] Requires analyzing the problem using *Material Requirements Planning (MRP-I or “little MRP”)* as well as *Manufacturing Resources Planning (MRP-II)* approaches.
   c. Two different lot-sizing policies are considered, i.e., lot-for-lot (LFL) and fixed-lot.
      
      \[\Rightarrow\] There is a need to look at different “what if?” scenarios, in order to select the best course of action.

3. **Software:**

Predominantly EXCEL for implementing the algorithms/techniques for evaluating the total costs with MRP I and MRP II.