**2017: miPads Supply Chain Management Project – Phase 2**

**Team B**

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Manufacture and Assembly

This team deals with building the database systems needed for manufacturing and assembling of miPads and for interacting with component suppliers as well as with the warehouse information infrastructure.

This is in addition to the main phase 2 information provided in a separate document. This is more specific to your team.

1. I want two levels in this stage. A manufacturing (or sub-assembly) stage and an assembly stage. So, you need to define databases and other structures for these two types. The manufacturing will take the components and create a number of modules. Then the assemblers will put together the modules and test the miPads.
2. The information at each stage should be distinct. Each should have different attributes as they are performing different operations. Different types of informationare carried by each. Make sure that there is a time-take-to-perform for each operation in the manufacturing and or assembly. There may be a chain of these (as in an assembly line). Testing should have its own tables to make sure that the miPads are perfect for shipment. Testing will also take time to perform. So, you have some “time periods” and sequences in your part of the SCM module.
3. The manufacturing stage will interact with the component suppliers (Team A). Make sure they are aware of what components you need for your manufacturing (sub-assembly).
4. The sub-assembly will feed into the assembly section which in turn will have a testing section for quality control and final acceptance. The assembly stage (after testing) will interact with the warehouse and distribution team (Team C). There may be some common tables.
5. The manufacturing and testing stage should have its own database which has other types of information needed for assembly than for manufacturing.
6. Don’t worry about transportation, money/funds or about employees. You can have a simple table for employees (name and id) and for instruments or tools (description and id) which will be used to have information about who manufactured, assembled or tested the miPads.
7. Divide the work among yourself as you see fit. But make it equitable.
8. Look at all the various items needed by the design report and do the design accordingly. Mainly worry about how orders flow and how assembly sections flow through your setup and the interaction with Team A and Team C.
9. Even though in reality you will need multiple distributed databases, for our project, they will all be in the same database, but distinguish between the sets of tables needed by the different parts of your setup through some naming conventions.
10. You will interact with the Teams A and C and set up how to perform triggers from your database to theirs and vice versa. Orders for miPads will come from Team C and you supply miPads to fulfill the orders. This order will chain into orders for assembly and manufacturing stages. As availability of components gets below some level, this may trigger orders for components from Team A. As Team A fulfills orders and replenishes stock in your SCM module, you make/assemble more miPads and supply them to the warehouse and distributors (Team C). This whole orchestration should work smoothly and use triggers to perform automatic flow of orders and miPads.
11. You will need to create some PL/SQL functions that will mimic the various “operations” in your stage. For example, a PL/SQL program can mimic manufacture a particular sub-component (say makeMotherBoard) and may just “sleep” for some time and write an output “making Motherboard Begin” and “making MotherBoard End” before and after the sleep period.

Log table

Settle down the types of the miPad

2 colors : black, white

2 sizes: m, L