# Distinction Task 6.3.1: Description of the Project

## Short description about Database

For this distinction task, I am thinking to make a database based on one of the biggest industry groups of India, the TATA group. This database will try how the business structure is distributed under Multinational groups such as the TATA group. As this group involves more than 100 companies from many industry segments it is virtually impossible to precisely map all of them in the database with the current amount of knowledge so, I'll include some of the main industry segments that it includes such as the steel segment, motor segment, education segment, defense segment, telecommunication segment, finance segment, health segment, and research segment. There are many companies under each segment, so I'll try to map the basic structures of all the companies and how they are separated from each other and sometimes rely on each other. I also try to show how the managing structure and flow of command works in such large groups.

All of the segments having many companies and each company having large capacity so much so that each can have their dedicated project. So, just for sake of simplicity I’ll only include one company from each segment.

By having such a large number and verity to play with, I can almost illustrate any of the database concepts. however, this project includes the name of the TATA group this can be applied to any large multinational group.

## List the entities that you could identify in the selected scenario.

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| --- | --- |
| Entities |  |
| Group Management | ID, Name, Name, Position, age, start date, mobile, email, address, country, post code, salary |
| Segments | Chemicals, FMCG, Retail and E-commerce, Energy, Engineering, Information systems and communication, Hotels, Financial services, Iron and steel, other Acquisitions, Education, Automotive |
| FMCG | Tata Starbucks |
| Education | Tata institute of Fundamental Research |
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|  |  |
| Tata Starbucks | Top Management, Stores, Managers, Staff, Trainers, Suppliers, Income(Profit-loss) |
| Tata Institute of Fundamental Research(Edu) | Management, IT staff, student, courses, research department, teachers and professors |
|  |  |
| Management | Name, Position, age , start date, department, mobile, email, address, country, post code Achievements, Previous positions |
| IT staff | Name, Position, age, start date, mobile, email, address, country, post code, salary |
| Starbucks Stores | Code, name, location, size, available products, staff, Suppliers, Income |
| Available products | Code, name, type, selling price, manufacturing price, average wastage, Supplier, sell margin introduction date, change date, End date, promo type |
| Starbucks Staff | Id, name, position, age, Start date, mobile, email, address, postcode, job status, ratting, Achievements |
| Starbucks suppliers | Id, name, location, time, product code, supplier rating, contract start date, contract end date, special notes, contact name, contact phone, contact mail |
| Income | Date, income by shop sell, income by other sell, product costing, salary payment, wastage, total profit/loss, cumulative profit/loss |
|  |  |
| Edu student | Id, name, Enrollment date, DOB, Course ID, phone number, email, address, previous courses, grades |
| Course | Course ID, name, instructor ID, Tutor ID, semester, year, course introduction date, comments |
| Instructor | Instructor ID, name, phone, mail, address, postcode, |
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## Mention the Cardinality among entities.

As in this scenario there are many companies and their different department with staff, student and courses as well, there will be many one-to-one relation between different entities. As tables including student-course, staff-department, management-staff includes one-to-many and many-to-many relationships. Supplier and customer can be cyclic relationship as well.