

Distinction Task 6.3.1: Description of the Project

1. 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.

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

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
Chemical	Tata Chemicals
FMCG	Tata Starbucks
Retail and E-commerce	Tata Cliq, Star Bazzar
Energy	Tata Power
Engineering	Tata Motors, Tata Advanced Materials
Information system and communication	Tata Communication
Hotels	Taj Hotels
Financial Services	Tata Capital
Iron and steel	Tata Steel
Education	Tata institute of Fundamental Research
Other Acquisitions	Jaguar Cars, Land Rover

Tata Chemicals	Management, staff, product, supplier, customer, partners,
Tata Starbucks	Top Management, Stores, Managers, Staff, Trainers, Suppliers, Income(Profit-loss)
Tata Cliq	Management, IT support, warehouses, delivery team, support staff, legal team
Tata Motors	Management, Manufacturing staff, IT staff, Finance department, Retail Department, Motor clubs,
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, rating, 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,

3. 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.