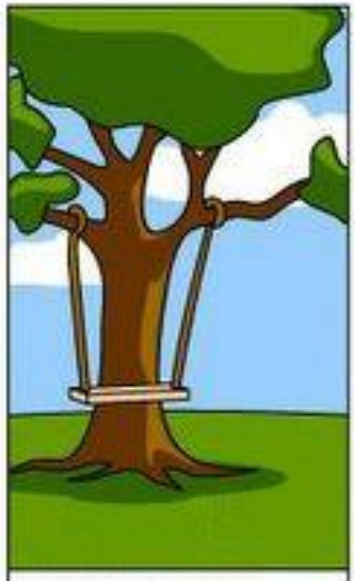
cphbusiness

COPENHAGEN BUSINESS ACADEMY

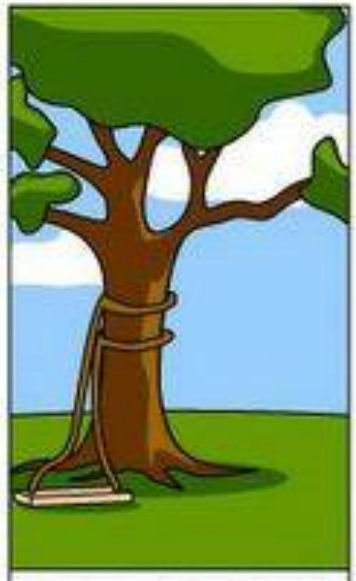
- Data Manupilation Language(DML) and Data Definition Language(DDL)

How the customer explained it



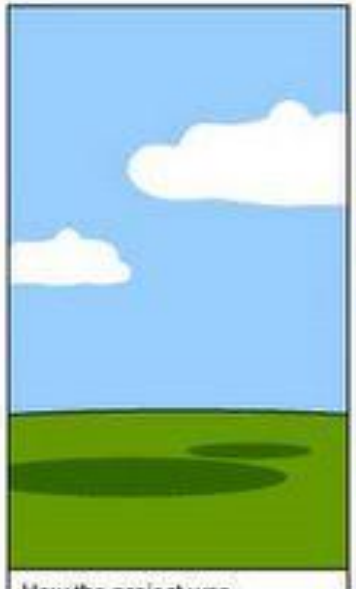
How the Project Leader understood it

How the Analyst designed it

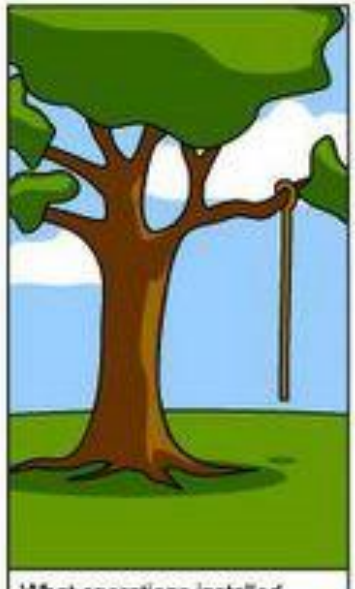


How the Programmer wrote it

How the Business Consultant described it

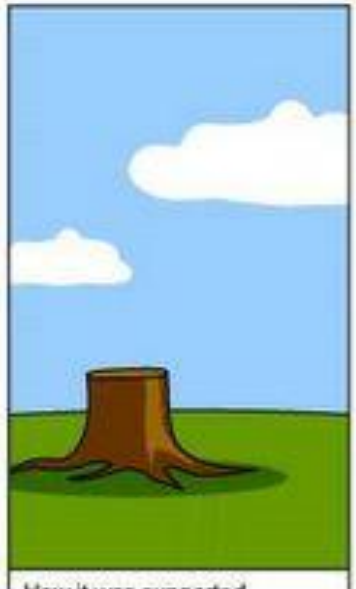


How the project was documented



What operations installed

How the customer was billed



How it was supported

What the customer really needed

DML and DDL

Data Manupliation Language- statements are used for managing data within schema objects.	Data Definition Language -statements are used to define the database structure or schema
SELECT- retrieve data from the a database	CREATE - - to create objects in the database
INSERT - insert data into a table	ALTER -alters the structure of the database
UPDATE -updates existing data within a table	DROP- delete objects from the database
DELETE - deletes all records from a table, the space for the records remain	TRUNCATE - remove all records from a table, including all spaces allocated for the records are removed
	COMMENT - add comments to the data dictionary
	RENAME - rename an object

Select from more than one table

```
SELECT firstName,  lastName, city,       addressLine1
FROM      employees, offices
WHERE employees.officeCode = offices.officeCode;
```

1. Make a select expression that gives customer's name and the name of the representative working with this customer.

2. Make a select expression as above, but where only Italian customers

3. Make a select expression that provides the name of the representative and the name of the country customer come from

Subquery

What is the most expensive model for 'Autoart Studio Design’?

```
select *from products
where MSRP =
      (select max(MSRP)
       from products
       where productVendor = 'Autoart Studio Design');
```

Which sales Rep cusotmer has highest creditLimit?

```
select *
from employees
where employeeNumber = (
        select salesRepEmployeeNumber from
                (select salesRepEmployeeNumber, sum(creditLimit) as sum
                from customers
                group by salesRepEmployeeNumber
                order by sum desc
                limit 1) as myTable);
```

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Update & insert

SQL Update

```
update employees
set lastName = "Petterson"
where employeeNumber= 1216;
```

1. Create a SQL update expression that changes the employee Leslie Jennings last name to Smith.
2. Create a SQL update expression changing customer Roland Keitel's first name to "Dr. Roland ".
3. Create a SQL expression changes all Spanish customers to be served by the account team in 1702 (named Martin Gehard).
4. Create a SQL expression that updates all motorcycle models MSRP price by 10%. Make the SQL expression that updates all customers with null in the address line 2 to have the empty string in the address line 2 (to test the null with "is null", not "= null")

SQL Insert

```
INSERT INTO `employees`
(`employeeNumber`,`lastName`,`firstName`,`extension`,
`email`,`officeCode`,`reportsTo`,`jobTitle`)
VALUES
(1188,'Firrelli','Julie','x2173','jfirrelli@classicmodelcars.com','2',1143,'Sales
Rep');
```

1. Create a SQL insert statement that creates a new product type called bike
2. Create a SQL expression that makes the two products (in a statement). A triathlon bike and a mountain bike (low ones like specific - find some on the web)
3. Make a new office in Copenhagen
4. Add a new employee to the office in Copenhagen
5. Export table medarbejdere as SQL expressions, and examine whether made an insert for the entire table or an insert per. number.
6. What happens if you do not mention all the fields in an insert statement?

Join

You can put tables together typically using foreign key

```
select *
from customers
        join employees
        on employeeNumber = salesRepEmployeeNumber;
```

1. Make a list of names sales representative who has customers in France
2. Make a list of sales representative with office in United States

SQL Delete

DELETE FROM products WHERE productline = "Trains"

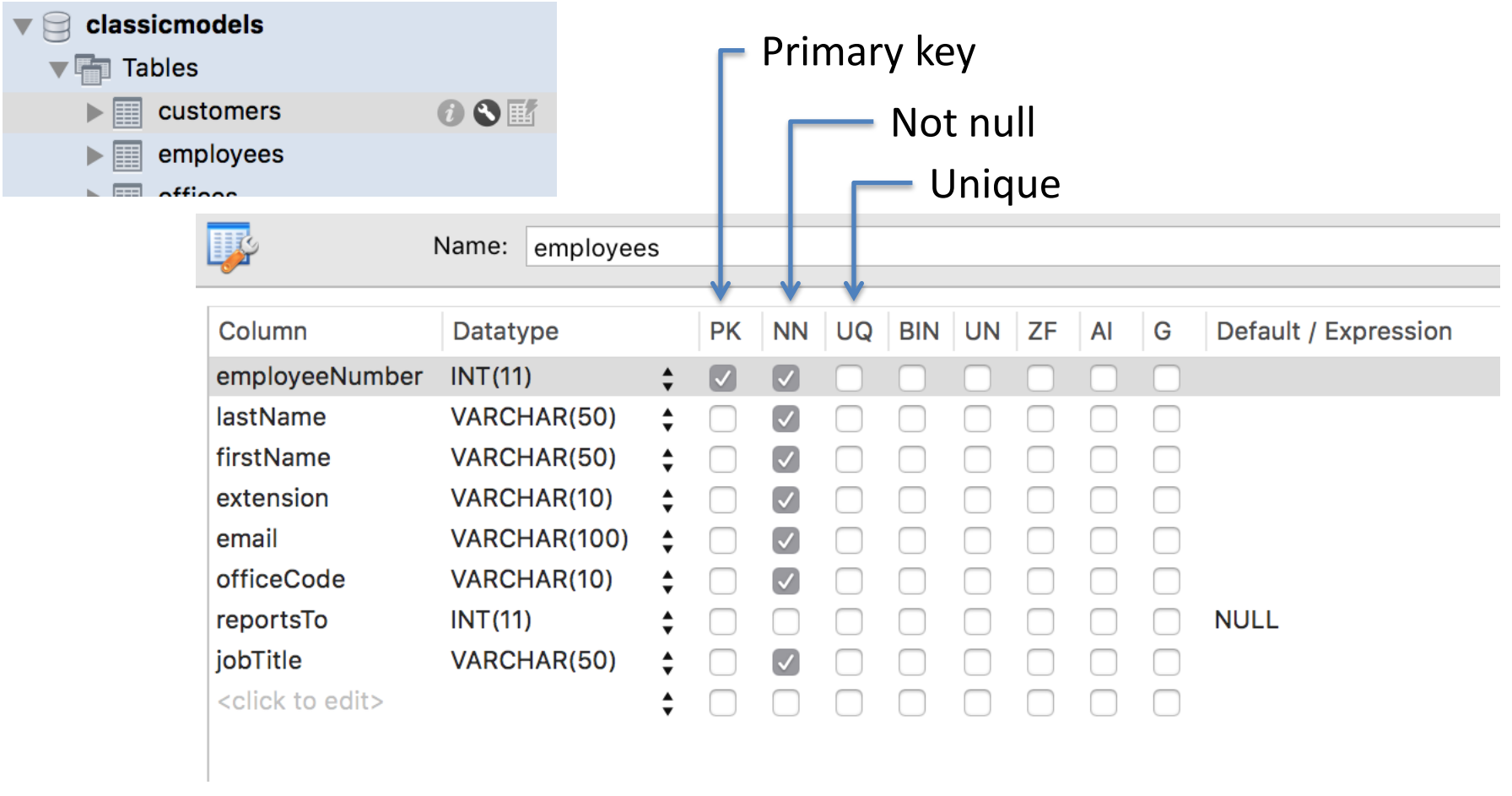
Delete from products where productline = "Trains”
Error Code: 1451. Cannot delete or update a parent row:
a foreign key constraint fails
(`classicmodels`.`orderdetails`, CONSTRAINT `orderdetails_ibfk_2`
FOREIGN KEY (`productCode`) REFERENCES `products` (`productCode`))

1. Find all the rows that you need to delete in the parent table in order to perform the above delete

SQL Table – create table command

```
CREATE TABLE `employees` (
  `employeeNumber` int(11) NOT NULL, /* 11 says how many characters to display */
  `lastName` varchar(50) NOT NULL, /* 50 is max number of chars */
  `firstName` varchar(50) NOT NULL, /* not null – will fail if null value stored */
  `extension` varchar(10) NOT NULL,
  `email` varchar(100) NOT NULL,
  `officeCode` varchar(10) NOT NULL,
  `reportsTo` int(11) DEFAULT NULL,
  `jobTitle` varchar(50) NOT NULL,
  PRIMARY KEY (`employeeNumber`), /* unique field, indexed for speed */
  KEY `reportsTo` (`reportsTo`),          /* indexed for speedy retrieval */
  KEY `officeCode` (`officeCode`),
  CONSTRAINT `employees_ibfk_1`     /* the constraint needs a name … (this is a bad name)
       FOREIGN KEY (`reportsTo`)        /* this number must exist in the other table */
       REFERENCES `employees` (`employeeNumber`),
  CONSTRAINT `employees_ibfk_2`
       FOREIGN KEY (`officeCode`)
       REFERENCES `offices` (`officeCode`)
)
```

Workspace – table tool



SQL Cascade delete – task for tomorrow

http://www.mysqltutorial.org/mysql-on-delete-cascade/

Think about how you can delete all products of a given product line