# Stored procedure 1

Example procedure for creating a new department:

```
@
CREATE PROCEDURE New_dept(
     IN pnumber INTEGER,
     pname VARCHAR(20),
     pstore INTEGER,
     pfloor INTEGER,
     pmanager INTEGER)

NOT DETERMINISTIC
MODIFIES SQL DATA
     insert into dept(number, name, store, floor, manager)
     values (pnumber, pname, pstore, pfloor, pmanager);
@
```

Execute the procedure to create a new department:

```
CALL New_dept(105,'Book',8,3,37);
```

# Stored procedure 2

Example procedure that increases the price of all items in a
particular store with 10%. Cursor dept_numbers is used to
iterate on all the departments in the store:

```
@
CREATE PROCEDURE increase_price( IN pstore INTEGER)
MODIFIES SQL DATA
BEGIN
declare dn INTEGER;
declare dept_numbers cursor for
          select number from dept
          where store = pstore;
open dept_numbers;
begin
     declare exit handler for not found begin end;
     loop
          fetch dept_numbers into dn;
          update item
          set price = price * 1.1
          where dept = dn;
     end loop;
end;
close dept_numbers;
END
@
```

# Trigger 1: Logging updates

The example trigger writes in a special log-table all items whose quantity (qoh) has been changed by an update operation so that it goes under a specified threshold (20).

```
create table item_qty_log
    (item INTEGER NOT NULL,
     qoh INTEGER,
     supplier INTEGER);

@
create trigger item_update
after update on item
referencing new table as new_table

begin atomic
    insert into item_qty_log(item, qoh, supplier)
    select number, qoh, supplier
    from new_table
    where qoh<20;
end
@
```

# Trigger 2: Salary constraint

The example trigger checks if the new value of the employees salary is increased with more than 10% than the old value. If so, the update operation is rolled back.

```
@
create trigger update_emp
after update on employee
REFERENCING NEW TABLE AS Ntable OLD TABLE AS Otable
BEGIN ATOMIC
        declare salary_exception condition for SQLSTATE '07030';
        if exists (select * from Ntable, Otable
        where Ntable.number =Otable.number and
        Ntable.salary > 1.1 * Otable.salary )
        then signal salary_exception;
    end if;
END
@
```

# The Information Schema

Interactive commands for querying the system catalogue:
* describe;
* list;

Example SQL queries for tables, columns in a table and constraints:

select table_name from information_schema.tables;

select column_name from information_schema.columns
where table_name='EMPLOYEE';

select constraint_name, unique_constraint_name
from information_schema.referential_constraints;