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## Project Stage 01

### Ownership

- Student: Marius Vintila
- Group: 341C5
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- [Git URL for this lab](#)

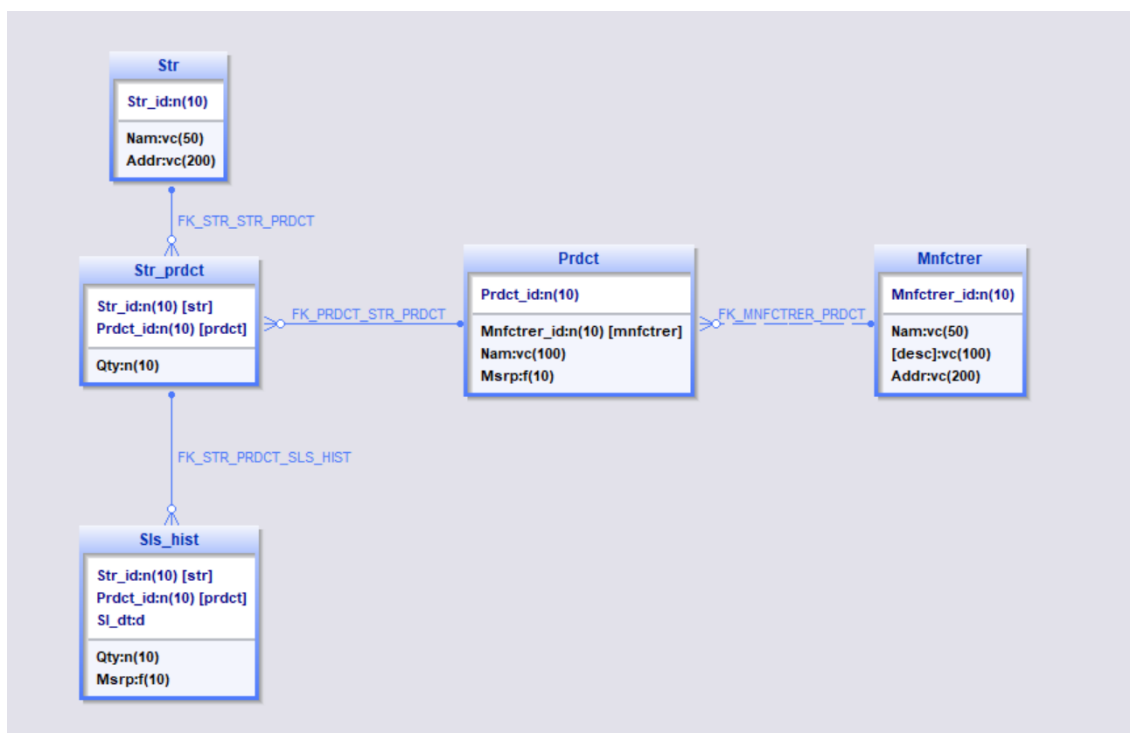
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**NOTE:** Please note that this repository is private. You need to provide me with your github account to provide you access.

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## XCASE si descrierea modelului

### XCASE Diagram



## Definirea structurilor tabelare

În cadrul proiectului ales, *Managementul componentelor de calculator dintr-un lanț de magazine*, am ales să mă folosesc de următoarele structuri:

- STR: Store - Entitate folosită pentru a salva magazinele din lanț
- MNFCTRER: Manufacturer - Entitate folosită pentru a salva producătorii de componente
- PRDCT: Product - Entitate folosită pentru a salva componentele de calculator
- STR\_PRDCT: Store\_Product - Entitate folosită pentru a salva produsele din fiecare magazin, împreună cu cantitatea acestora
- SLS\_HIST: Sales\_History - Entitate folosită pentru a salva istoricul de vânzări al produselor pentru fiecare magazin

**NOTE** Din cauza faptului că versiunea de XCASE oferită de dumneavoastră are o limitare de doar 5 entități, a trebuit să simplific ideea inițială

## Definirea și descrierea tabelelor

### 1. STR:

- STR\_ID (PK): Store\_ID - Identificator unic corespunzător unui singur magazin
- NAM, ADDR: Name, Address - Coloane ce memorează detalii despre magazin

### 2. MNFCTRER:

- MNFCTRER\_ID (PK): Manufacturer\_ID - Identificator unic corespunzător unui singur producător
- NAM, DESC, ADDR: Name, Description, Address - Coloane ce memorează detalii despre magazin

### 3. PRDCT:

- PRDCT\_ID (PK): Product\_ID - Identificator unic corespunzător unui singur produs
- MNFCTRER\_ID (FK) - Fiecare produs aparține de un producător

- NAM, MSRP: Name, Manufacturer's Suggested Retail Price - Coloane ce memoreaza detalii despre un produs
4. STR\_PRDCT:
- STR\_ID, PRDCT\_ID (PK, FK) - Cheie primara compusa pentru a asocia o entitate unui magazin si unui produs
  - QTY: Quantity - Cantitatea in care se regaseste produsul PRDCT\_ID in magazinul STR\_ID
5. SLS\_HIST:
- STR\_ID, PRDCT\_ID (PK, FK) - Cheie primara compusa pentru a asocia o entitate unui Store\_Product
  - SL\_DT (PK): Sale\_Date - Data vanzarii produsului in magazin; Nu se pot vinde doua produse identice in acelasi magazin in aceeasi secunda
  - QTY, MSRP - Pretul si cantitatea cu care s-a vandut produsul la momentul respectiv

## Relatiile Master-Detail

1. Un Producator are mai multe produse, iar un produs apartine de un producator, intotdeauna
  - MNFCTRER - PRDCT
2. Un Magazin are mai multe produse, iar un produs poate exista in mai multe magazine, in cantitati diferite
  - STR - STR\_PRDCT
  - PRDCT - STR\_PRDCT
3. Un produs din cadrul unui magazin se poate vinde de mai multe ori, iar mai multe vanzari i se pot asocia unui produs si unui magazin
  - STR\_PRDCT - SLS\_HIST

## Script

```
CREATE TABLE STR
(
    STR_ID NUMBER(10) NOT NULL ,
    NAM VARCHAR2(50) NOT NULL ,
    ADDR VARCHAR2(200) NOT NULL ,
    CONSTRAINT PK_STR PRIMARY KEY (STR_ID) NOT DEFERRABLE Initially IMMEDIATE
    USING INDEX
    PCTFREE 10
    INITRANS 2
    MAXTRANS 255
    STORAGE
    (
        INITIAL 64K
        NEXT 0K
        MINEXTENTS 1
        MAXEXTENTS 2147483645
        PCTINCREASE 0
    )
)

PCTFREE 10
PCTUSED 40
INITRANS 1
MAXTRANS 255
STORAGE
(
```

```

        INITIAL 64K
        NEXT 0K
        MINEXTENTS 1
        MAXEXTENTS 2147483645
        PCTINCREASE 0
    )
/

CREATE TABLE PRDCT
(
    PRDCT_ID NUMBER(10) NOT NULL ,
    MNFCTRER_ID NUMBER(10) NOT NULL ,
    NAM VARCHAR2(100) NOT NULL ,
    MSRP FLOAT(10) NOT NULL ,
    CONSTRAINT PK_PRDCT PRIMARY KEY (PRDCT_ID) NOT DEFERRABLE Initially IMMEDIATE
    USING INDEX
    PCTFREE 10
    INITRANS 2
    MAXTRANS 255
    STORAGE
    (
        INITIAL 64K
        NEXT 0K
        MINEXTENTS 1
        MAXEXTENTS 2147483645
        PCTINCREASE 0
    )
)

PCTFREE 10
PCTUSED 40
INITRANS 1
MAXTRANS 255
STORAGE
(
    INITIAL 64K
    NEXT 0K
    MINEXTENTS 1
    MAXEXTENTS 2147483645
    PCTINCREASE 0
)
/

CREATE TABLE STR_PRDCT
(
    STR_ID NUMBER(10) NOT NULL ,
    PRDCT_ID NUMBER(10) NOT NULL ,
    QTY NUMBER(10) NOT NULL ,
    CONSTRAINT PK_STR_PRDCT PRIMARY KEY (STR_ID,PRDCT_ID) NOT DEFERRABLE Initially
IMMEDIATE
    USING INDEX
    PCTFREE 10
    INITRANS 2

```

```

MAXTRANS 255
STORAGE
(
    INITIAL 64K
    NEXT 0K
    MINEXTENTS 1
    MAXEXTENTS 2147483645
    PCTINCREASE 0
)
)

PCTFREE 10
PCTUSED 40
INITTRANS 1
MAXTRANS 255
STORAGE
(
    INITIAL 64K
    NEXT 0K
    MINEXTENTS 1
    MAXEXTENTS 2147483645
    PCTINCREASE 0
)
/

CREATE TABLE MNFCTRER
(
    MNFCTRER_ID NUMBER(10) NOT NULL ,
    NAM VARCHAR2(50) NOT NULL ,
    "DESC" VARCHAR2(100) NOT NULL ,
    ADDR VARCHAR2(200) NOT NULL ,
    CONSTRAINT PK_MNFCTRER PRIMARY KEY (MNFCTRER_ID) NOT DEFERRABLE Initially
IMMEDIATE
USING INDEX
PCTFREE 10
INITTRANS 2
MAXTRANS 255
STORAGE
(
    INITIAL 64K
    NEXT 0K
    MINEXTENTS 1
    MAXEXTENTS 2147483645
    PCTINCREASE 0
)
)

PCTFREE 10
PCTUSED 40
INITTRANS 1
MAXTRANS 255
STORAGE
(
    INITIAL 64K

```

```

        NEXT 0K
        MINEXTENTS 1
        MAXEXTENTS 2147483645
        PCTINCREASE 0
    )
/

CREATE TABLE SLS_HIST
(
    STR_ID NUMBER(10) NOT NULL ,
    PRDCT_ID NUMBER(10) NOT NULL ,
    SL_DT DATE NOT NULL ,
    QTY NUMBER(10) NOT NULL ,
    MSRP FLOAT(10) NOT NULL ,
    CONSTRAINT PK_SLS_HIST PRIMARY KEY (STR_ID,PRDCT_ID,SL_DT) NOT DEFERRABLE
Initially IMMEDIATE
    USING INDEX
    PCTFREE 10
    INITTRANS 2
    MAXTRANS 255
    STORAGE
    (
        INITIAL 64K
        NEXT 0K
        MINEXTENTS 1
        MAXEXTENTS 2147483645
        PCTINCREASE 0
    )
)
PCTFREE 10
PCTUSED 40
INITTRANS 1
MAXTRANS 255
STORAGE
(
    INITIAL 64K
    NEXT 0K
    MINEXTENTS 1
    MAXEXTENTS 2147483645
    PCTINCREASE 0
)
/

ALTER TABLE PRDCT ADD
(
    CONSTRAINT FK_MNFCTRER_PRDCT FOREIGN KEY
    ( MNFCTRER_ID )
    REFERENCES MNFCTRER
    ( MNFCTRER_ID )
    NOT DEFERRABLE Initially IMMEDIATE
)
/

```

```

ALTER TABLE STR_PRDCT ADD
(
    CONSTRAINT FK_PRDCT_STR_PRDCT FOREIGN KEY
        ( PRDCT_ID )
    REFERENCES PRDCT
        ( PRDCT_ID )
    NOT DEFERRABLE Initially IMMEDIATE
)
/

ALTER TABLE STR_PRDCT ADD
(
    CONSTRAINT FK_STR_STR_PRDCT FOREIGN KEY
        ( STR_ID )
    REFERENCES STR
        ( STR_ID )
    NOT DEFERRABLE Initially IMMEDIATE
)
/

ALTER TABLE SLS_HIST ADD
(
    CONSTRAINT FK_STR_PRDCT_SLS_HIST FOREIGN KEY
        ( STR_ID , PRDCT_ID )
    REFERENCES STR_PRDCT
        ( STR_ID , PRDCT_ID )
    NOT DEFERRABLE Initially IMMEDIATE
)
/

```

## APEX

In APEX, am importat fiecare comanda din script-ul de mai sus folosind tool-ul SQL Commands, astfel generand toate cele 5 tabele si relatiile dintre ele

### Structura tabelelor in APEX

Am folosit Tool-ul Query Builder pentru a afisa toate cele 5 tabele in acelasi timp:

MV Marius Vintila

SchemaWKSP\_CASE94531

SaveRun

STR

STR\_ID789

NAMA

ADDRA

STR\_PRDCT

STR\_ID789

PRDCT\_ID789

QTY789

SLS\_HIST

STR\_ID789

PRDCT\_ID789

SL\_DT31

QTY789

MSRP789

PRDCT

PRDCT\_ID789

MNFCTRER\_ID789

NAMA

MSRP789

MNFCTRER

MNFCTRER\_ID789

NAMA

DESCA

ADDRA

De asemenea, se pot observa relatiile dintre tabele in Object Browser, pe tab-ul de Model:

MV Marius Vintila

SchemaWKSP\_CASE94531

TableDataIndexesModelConstraintsGrantsStatisticsUI DefaultsTriggersDependenciesSQLRESTSample Queries

PRDCT

MNFCTRER

PRDCT

STR\_PRDCT

MV Marius Vintila

SchemaWKSP\_CASE94531

TableDataIndexesModelConstraintsGrantsStatisticsUI DefaultsTriggersDependenciesSQLRESTSample Queries

STR\_PRDCT

STRPRDCT

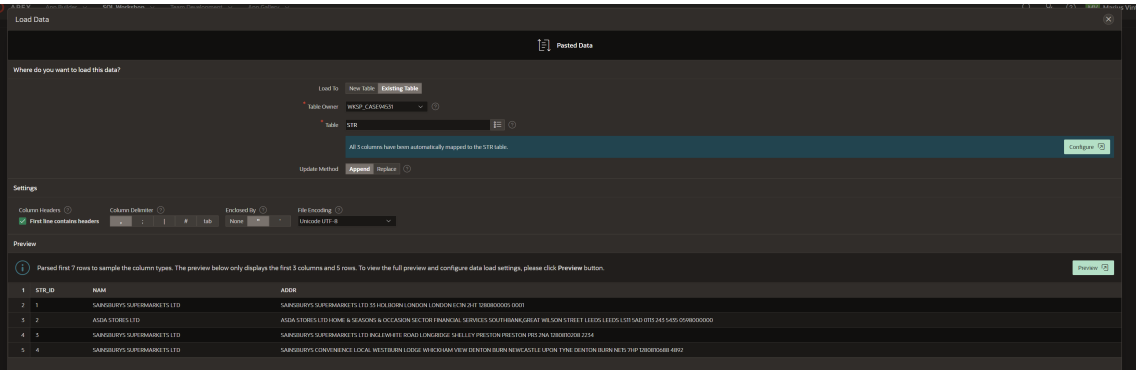
SLS\_HIST



# Data Load

Pentru adaugarea de date, am creat un fisier CSV pe care l-am importat in tabela STR

	A	B	C
1	STR_ID	NAM	ADDR
2	1	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS SUPERMARKETS LTD 33 HOLBORN LONDON LONDON EC1N 2HT 1280800005 0001
3	2	ASDA STORES LTD	ASDA STORES LTD HOME & SEASONS & OCCASION SECTOR FINANCIAL SERVICES SOUTHBANK,GREAT WILSON STREET LEEDS LEEDS LS11 5AD 0113 243 5435 0598000000
4	3	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS SUPERMARKETS LTD INGLEWHITE ROAD LONGRIDGE SHELLEY PRESTON PRESTON PR3 2NA 1280810208 2234
5	4	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS CONVENIENCE LOCAL WESTBURN LODGE WHICKHAM VIEW DENTON BURN NEWCASTLE UPON TYNE DENTON BURN NE15 7HP 1280810688 4892
6	5	ASDA STORES LTD	ASDA STORES LTD WESTON ROAD PARK ROYAL EALING LONDON PARK ROYAL NW10 7LW 020 8951 9000 0598004710 4596
7	6	ASDA STORES LTD	ASDA STORES LTD BARKBY THORPE LANE THURMASTON LEICESTER THURMASTON LE4 8GN 01162 645300 0598004765 5719



Workshop				Team Development	App Gallery	Search	Notifications	Marius Vintila
				Schema WSCP_CASEWEB				
				STR				
				Table Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL REST Sample Queries				
				Query Count Rows Insert Row Load Data				
				EDIT STR_ID NAM ADDR				
	1	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS SUPERMARKETS LTD 33 HOLBORN LONDON LONDON EC1N 2HT 1280800005 0001					
	2	ASDA STORES LTD	ASDA STORES LTD HOME & SEASONS & OCCASION SECTOR FINANCIAL SERVICES SOUTHBANK,GREAT WILSON STREET LEEDS LEEDS LS11 5AD 0113 243 5435 0598000000					
	3	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS SUPERMARKETS LTD INGLEWHITE ROAD LONGRIDGE SHELLEY PRESTON PRESTON PR3 2NA 1280810208 2234					
	4	SAINSBURYS SUPERMARKETS LTD	SAINSBURYS CONVENIENCE LOCAL WESTBURN LODGE WHICKHAM VIEW DENTON BURN NEWCASTLE UPON TYNE DENTON BURN NE15 7HP 1280810688 4892					
	5	ASDA STORES LTD	ASDA STORES LTD WESTON ROAD PARK ROYAL EALING LONDON PARK ROYAL NW10 7LW 020 8951 9000 0598004710 4596					
	6	ASDA STORES LTD	ASDA STORES LTD BARKBY THORPE LANE THURMASTON LEICESTER THURMASTON LE4 8GN 01162 645300 0598004765 5719					
Download								

Am repetat procedeul si pentru restul tabelelor.