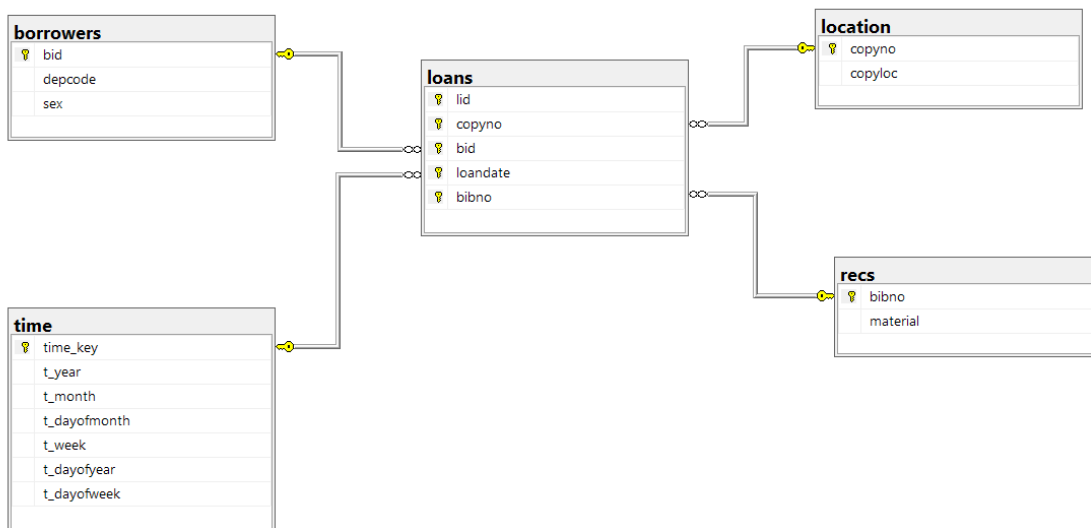


Εργασία - Μέρος Β

Σχεδιασμός Βάσεων Δεδομένων

Δανοπούλου Αιμιλία - 3170033

Ζήτημα Πρώτο



Δημιουργία πινάκων

```
CREATE TABLE borrowers
(bid int primary key,
depcode int,
sex char(1)
);
```

```
CREATE TABLE location
(copyno char(8) primary key,
copyloc char(3)
);
```

```
CREATE TABLE recs
(bibno int primary key,
material varchar(30)
);
```

```
CREATE TABLE time
(time_key date primary key,
t_year int,
t_month int,
t_dayofmonth int,
t_week int,
t_dayofyear int,
t_dayofweek int)
```

```
CREATE TABLE loans
(lid int,
copyno char(8),
bid int,
loandate date,
bibno int
primary key (lid,copyno,bid,loandate,bibno)
foreign key (copyno) references location(copyno),
foreign key (bibno) references recs(bibno),
foreign key (bid) references borrowers(bid),
foreign key (loandate) references time(time_key)
);
```

Γέμισμα πινάκων

```
INSERT INTO borrowers
SELECT bid, deptime, sex
FROM LIBRARY.dbo.borrowers
```

```
INSERT INTO location
SELECT copyno, copyloc
FROM LIBRARY.dbo.copies
```

```
INSERT INTO recs
SELECT bibno, material
FROM LIBRARY.dbo.bibrecs
```

```
INSERT INTO time
  SELECT DISTINCT loandate, datepart(year,loandate) ,
  datepart(month,loandate),
  datepart(day,loandate) , datepart(week,loandate),
  datepart(dayofyear,loandate),
  datepart(dw,loandate)
FROM LIBRARY.dbo.loanstats
```

```
INSERT INTO loans
  SELECT lid, LIBRARY.dbo.loanstats.copyno ,bid,loandate ,bibno
  FROM LIBRARY.dbo.loanstats,LIBRARY.dbo.copies
  WHERE LIBRARY.dbo.loanstats.copyno = LIBRARY.dbo.copies.copyno
```

Ζήτημα Δεύτερο

```
1. SELECT deptime , t_year, count(loans.bid)
FROM time, loans, borrowers
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
GROUP BY deptime, t_year
ORDER BY deptime,t_year
```

Results: 120 records

```
2.SELECT copyloc , material, count(loans.bid)
FROM location, loans, recls
WHERE location.copyno = loans.copyno
AND recls.bibno = loans.bibno
GROUP BY copyloc, material
ORDER BY copyloc,material;
```

Results: 15 records

```
3.SELECT t_month, sex, count(loans.lid)
FROM time , loans , borrowers
WHERE time.time_key = loans.loandate AND time.t_year > 2000
AND borrowers.bid = loans.bid
GROUP BY t_month, sex
ORDER BY t_month, sex
```

Results: 24 records

```
4.SELECT t_year, t_month , count(loans.lid)
FROM time, loans
WHERE time.time_key = loans.loandate
GROUP BY t_year, t_month
HAVING count(loans.lid) > 800
ORDER BY t_year, t_month
```

Results: 43 records

```
5.SELECT t_year, deptime, sex, count(loans.lid)
FROM time, loans, borrowers
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
GROUP BY ROLLUP(t_year, deptime, sex)
```

Results: 339 records

```
6.
CREATE VIEW V1 AS
SELECT deptime , sex ,count(loans.lid) as loans
FROM borrowers , loans
WHERE borrowers.sex ='F'
AND borrowers.bid = loans.bid
GROUP BY deptime, sex
```

```
CREATE VIEW V2 AS
SELECT deptime , sex ,count(loans.lid) AS loans
FROM borrowers , loans
WHERE borrowers.sex ='M'
AND borrowers.bid = loans.bid
GROUP BY deptime, sex
```

```
SELECT * FROM v1,v2
WHERE v1.deptime = v2.deptime
AND v1.loans > v2.loans
ORDER BY v1.deptime
```

Results: 6 records

Ζήτημα Τρίτο

Με τον κύβο

```
SELECT t_year, copyloc, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY CUBE(t_year, copyloc, sex)
```

Results: 212 records

Χωρίς τον κύβο

```
SELECT t_year, copyloc, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, copyloc, sex
```

Results: 96 records

```
SELECT t_year, copyloc, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, copyloc
```

Results: 60 records

```
SELECT t_year, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, sex
```

Results: 21 records

```
SELECT t_year, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year
```

Results: 12 records

```
SELECT copyloc, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY copyloc, sex
```

Results: 13 records

```
SELECT copyloc, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY copyloc
```

Results: 7 records

```
SELECT sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY sex
```

Results: 2 records

```
SELECT count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
```

Results: 1 record

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```
SELECT t_year, copyloc, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, copyloc, sex
UNION
SELECT t_year, copyloc, NULL, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, copyloc
UNION
SELECT t_year, NULL, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year, sex
UNION
SELECT t_year, NULL, NULL , count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY t_year
UNION
SELECT NULL, copyloc, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
```



```
GROUP BY copyloc, sex
UNION
SELECT NULL, copyloc, NULL, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY copyloc
UNION
SELECT NULL, NULL, sex, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
GROUP BY sex
UNION
SELECT NULL, NULL, NULL, count(loans.lid)
FROM time , borrowers, loans ,location
WHERE time.time_key = loans.loandate
AND borrowers.bid = loans.bid
AND location.copyno = loans.copyno
```