

## **Σχεδιασμός Βάσεων Δεδομένων**

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Εαρινό εξάμηνο 2020-2021

### **Δεύτερη Εργασία**

Ανάθεση: **24-05-2021**

Παράδοση: **06-06-2021 Ώρα (23:55)**

#### *Οδηγίες*

- *Η εργασία είναι ατομική και υποχρεωτική.*
- *Η υποβολή της εργασίας πρέπει να γίνει στο eclass.*
- *Το παραδοτέο σας θα πρέπει να είναι ένα αρχείο PDF με όνομα AM.pdf (όπου AM είναι ο αριθμός μητρώου σας. π.χ. "3180001.pdf").*
- *Πιθανή αντιγραφή θα τιμωρείται με μηδενισμό όλων των εμπλεκομένων.*



**ΑΡΙΣΤΕΙΔΗΣ ΧΡΟΝΟΠΟΥΛΟΣ 3160194**

### **Ζήτημα Πρώτο**

---

```
Create table campdata
(custID integer,
 fname varchar(30),
 lname varchar(30),
 cID integer,
 country varchar(30),
 bookID integer,
 bookDate date,
 campCode char(3),
 campName varchar(50),
 empno integer,
 catCode char(1),
 category varchar(20),
 unitCost numeric(4,2),
 startDate date,
 overnights integer,
 persons integer,
);

BULK INSERT campdata
FROM 'C:\Users\arhsxro\Downloads\CAMPDATA.TXT'
WITH (FIRSTROW =2, FIELDTERMINATOR='|', ROWTERMINATOR = '\n');
```

```
Create table customers
(custID integer primary key,
 fname varchar(30),
 lname varchar(30)
);
```

```
Create table camp
(campCode char(3) primary key,
 campName varchar(50)
);
```

```
Create table campcategory
(empno integer primary key ,
 catCode char(1),
 category varchar(20)
);
```

---

```
create table timeinfo
(time_key date primary key,
 t_year integer,
 t_month integer,
 t_dayofmonth integer
);
```

```
Create table country
(cID integer primary key,
country varchar(30)
);
```

```
Create table reservations
(bookID integer,
custID integer,
campCode char(3),
empno integer,
time_key date,
cID integer,
unitCost numeric(4,2),
bookDate date,
overnights integer,
persons integer
```

```
primary key(bookID,custID,campCode,empno,time_key,cID) ,
foreign key (custID) references customers(custID) ,
foreign key (campCode) references camp(campCode) ,
foreign key (empno) references campcategory(empno) ,
foreign key (time_key) references timeinfo(time_key) ,
foreign key (cID) references country(cID) ,
);
```

```
insert into customers
select distinct custID, fname, lname
from campdata
```

---

```
insert into camp
select distinct campCode, campName
from campdata
```

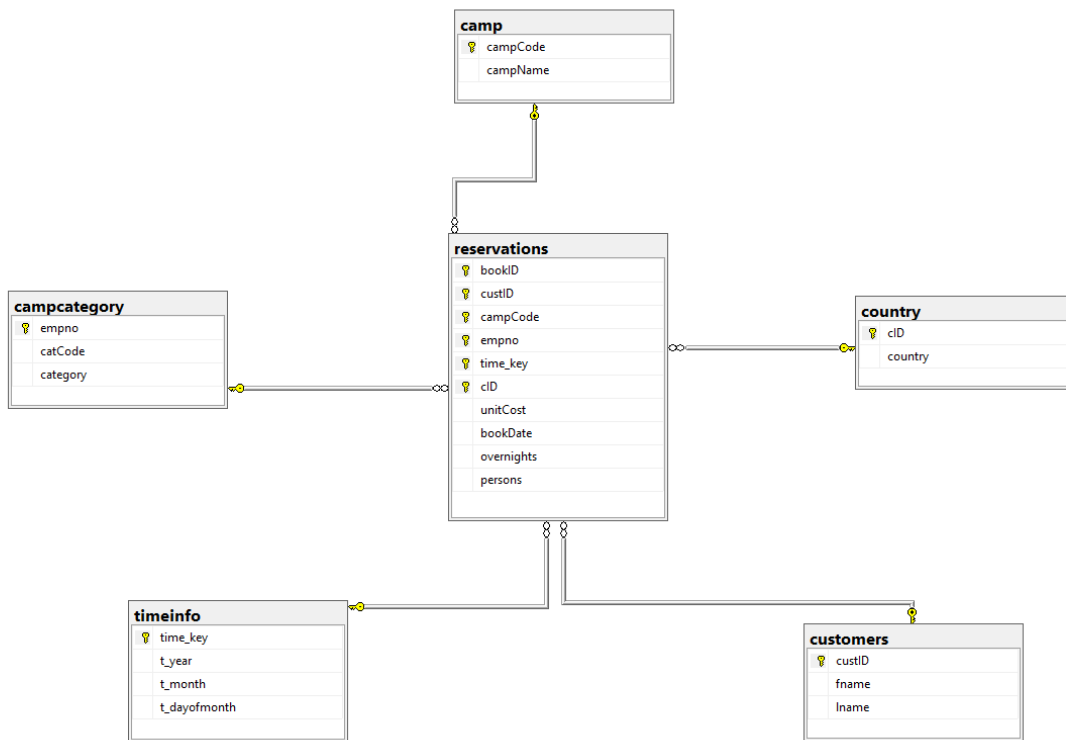
```
insert into campcategory
select distinct empno,catCode,category
from campdata
```

```
set datefirst 1;
insert into timeinfo
select distinct startDate ,datepart(year, startDate), datepart(month, startDate),
datepart(day,startDate)
from campdata
```

```
insert into country
select distinct cID, country
from campdata
```

```
insert into reservations
select bookID, custID, campCode, empno, startDate, cID, unitCost, bookDate, overnights, persons
from campdata
group by bookID, custID, campCode, empno, startDate, cID, unitCost, bookDate, overnights, persons
```

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## Ζήτημα Δεύτερο

2.1

```
SELECT TOP 100 country,fname,lname,SUM(unitCost*overnights*persons) AS cost
FROM customers,reservations,country
WHERE customers.custID=reservations.custID AND country.cID=reservations.cID
GROUP BY country,fname,lname
order by cost desc
```

2.2

```
SELECT  campName,campcategory.empno,SUM(unitCost*overnights*persons) AS cost
FROM camp,campcategory,reservations,timeinfo
WHERE camp.campCode=reservations.campCode AND campcategory.empno=reservations.empno
AND t_year=2000
group by campname,campcategory.empno
```

2.3

```
select t_month,campName,SUM(unitCost*overnights*persons) AS cost
from timeinfo,reservations,camp
where timeinfo.time_key = reservations.time_key and t_year=2018
AND camp.campCode=reservations.campCode
group by t_month,campName
order by campName
```

2.4

```
SELECT persons,t_year,campName,campcategory.empno,COUNT(persons)
FROM camp,campcategory,timeinfo,reservations
WHERE timeinfo.time_key=reservations.time_key
AND camp.campCode=reservations.campCode
AND campcategory.empno=reservations.empno
GROUP BY ROLLUP(t_year,persons,campName,campcategory.empno)
```

2.5

```
SELECT campName
FROM camp,reservations,timeinfo
WHERE t_year IN (2017, 2018)
GROUP BY campName
HAVING
    SUM(CASE WHEN t_year = 2018 AND timeinfo.time_key=reservations.time_key
    AND camp.campCode=reservations.campCode THEN persons ELSE 0 END)
>SUM(CASE WHEN t_year = 2017 AND timeinfo.time_key=reservations.time_key
    AND camp.campCode=reservations.campCode THEN persons ELSE 0 END)
```

## Ζήτημα Τρίτο

