Database Management Systems

Organization of a conference.

A conference is held during 5 business days and is divided into sessions. A session lasts half a day (starting at 9 AM or 2:30 PM) and bears on a specific theme.

The organizers have sent posters and registration forms before-hand to both universities and large companies that might be interested in the conference.

Potential participants should register by filling and returning the registration form with a down payment for their registration (200 to 250 euros) before a given date.

The registration forms allow collecting (among others) of the following information on each participant:

- name, address, phone
- hotel category desired (1 to 5 stars)
- designation of sessions the participant would like to attend
- name and address of institute paying for the participant (company, administration, ...)
- presence (or absence) of an accompanying person (spouse for instance). We suppose a participant cannot be accompanied by more than one person.

The participant is assigned a hotel. A price has been negotiated with each hotel, for a single room (solo participant) and for a double room (if accompanied). The prices are fixed per hotel, and do not vary according to the room in a given hotel. There are enough rooms in town to house all participants.

The participant will only be registered for sessions in which room remains (the number of places available in each session is limited). In April, the participant receives an acknowledgement of his registration (document A). At any moment, before or during the conference, we wish to know the list of sessions happening in any given time frame (morning or afternoon) with all information concerning the sessions (session number, name of session chair, max number of places in sessions, current number of registered participants, room/location...). There may be up to 5 parallel sessions in a given time frame. They all start either at 9AM or 2:30PM. Registration for any session must be paid for, the price of attendance may vary for different sessions.

The public relations office offers additional cultural activities (shows, excursions, concerts, sauna, tourism...) to occupy spouses and the free time of participants. Each activity has an identifier code and a designation. An activity is scheduled for a single date and time. The number of participants in an activity is limited. To participate, one needs to register at the latest the evening before the activity takes place. The public relations office wants to have the list of people registered for an activity available at 9PM the evening before the activity. For registration, only the conference participant name is known. For instance if M. Smith wishes

to register with his wife, 2 places will be accounted to M. Smith for this activity. Of course, each activity has a cost, which will appear in the final invoice.

I. Design

- Define the data dictionary.
- Give a conceptual entity relationship schema
- Give the relational schema associated to this conceptual schema
- List any additional constraints.

II. Application

- Write SQL scripts to define and create the database
- Populate the database with example tuples. This example testbed will try to cover most constraints of the conceptual schema. (At least 5 rows in each table)
- Write 20 requests to validate our work. The requests designed should be useful
 for the maintenance and daily use of the database. For instance, treating of an
 incoming request (check availability and register the participant), producing
 the participants list, etc...

Additional constraints

- Work will be done by at most 2 students.
- Work will be returned by email to: mailto:Yann.Thierry-Mieg@lip6.fr, Subject
 : [EFREI BDD] TP3 Name1 Name2
- Accepted formats: word (.doc, please no .docx), pdf + *.sql for database scripts. Use a zip or tgz archive (no exe, no rar please). Prefer pdf is you can.

DOC A: REGISTRATION RECEIPT

Third Int'l Conference on DataBase Chicago, 8-12 Feb. 2009 BREST (Mega-conference center)

> Mr Tevenac Erwan 2 rue amiral courbet 35000 Rennes

Thank you for registering to the conference. Here are the references of your registration:

Your registration ID: 444

Your accommodation; Grand Hotel 5 star

Ocean Blvd. Chicago

Tel: +301-123-7567

Accompanying person: none

The sessions that you are registered to:

Monday 8 9AM kick-off session Monday 8 14h30 future of DBMS

Tuesday 9 9AM distributed transactions in DBMS

Sorry, there was no more room left for this session:

Tuesday 9 14h30 Peer-to-peer DBMS

We have debited for down-payment: 300 USD

The full bill is accountable to EDF avenue de St Malo

35000 Rennes

The president