

Datenbankprogrammierung (Oracle)

Organisatorisches:

- Dieses Übungsblatt präsentiert ein paar SQL Puzzles, die Ihnen bei Langeweile die Ferien versüßen sollen. Das Übungsblatt ist weder relevant für die Klausur noch werden die Aufgaben / Lösungen jemals besprochen.
- Ich wünsche **Frohe Weihnachten** und einen **guten Rutsch ins neue Jahr**.

Aufgabe 1: Calculate the Sine Function

Let's assume that your SQL product does not have a sine function in its standard library. Can you write a query that will calculate the sine of a number in radians?

Aufgabe 2: Hotel Reservations

Suppose you are the clerk at Hotel SQL and you have the following table:

```
CREATE TABLE Hotel (  
    roomno SMALLINT NOT NULL,  
    arrival DATE NOT NULL,  
    departure DATE NOT NULL,  
    guest CHAR(30),  
    PRIMARY KEY (roomno, arrival),  
    CHECK (departure >= arrival));
```

Right now, the **CHECK()** clause enforces the data-integrity constraint that you cannot leave before you have arrived, but you want more. How do you enforce the rule that you cannot add a reservation that has an arrival date conflicting with the prior departure date for a given room?

Aufgabe 3: Playing the Ponies

You have just become the database manager for Mafia boss Eddie Franco ("the Doctor") Coddetti. He keeps records on horse races for statistical purposes and his basic table looks like this:

```
CREATE TABLE RacingResults (  
    track CHAR(3) NOT NULL,  
    racedate DATE NOT NULL,  
    race INTEGER NOT NULL,  
    win CHAR(30) NOT NULL,  
    place CHAR(30) NOT NULL,  
    show CHAR(30) NOT NULL,  
    PRIMARY KEY (track, date, race));
```

The track column shows the name of the track where the race was held, racedate is when it was held, race is the number of the race, and the other three columns are the names of the horses that won, placed, and showed for that race.

The Doc comes to you one day and he wants to know how many times each horse was in the money. What SQL query do you write for this?

Note: the phrase "in the money" means that the horse won, placed, or showed in a race – we don't care which.

Aufgabe 4: Decorate the Christmas Tree

Write a PL/SQL program which produces the following output. Note, how to write a PL/SQL program will be subject of lessons next year.

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