Introduction to Database Technology (DT)

Tutor Marked Assignment (TMA)

Introduction

A London-based walking tour company, Capital Promenades, requires a database to manage its walks, guides, participants, programme and bookings.

For your TMA assignment you are required to produce a design for a database suitable for this company as specified below. This contributes 25% of the overall marks for the module and will form the basis of the database you implement as part of your FMA assignment.

The TMA is due before the start of Session 5 of the module. Instructions for submission are given below.

Assignment Requirements

1. Review the requirements document, walkdatabase_reqs.pdf, and identify the entities required to meet these requirements.
2. Produce an **entity-relationship diagram**.
   This should be in the simple box/line, crow's foot format as introduced in class. Each box should contain just the name of the table it represents. Column names should not be included in the diagram. (**Note: no marks will be awarded for a diagram generated via tools such as the MySQL Workbench modelling tool, Visio etc.)**
3. Produce a listing showing **details for each table**.
   - You should follow the naming convention given in class for the table and column names.
   - Think carefully about splitting each attribute into its smallest meaningful item of data (e.g. store first name and surname separately rather than in a single 'name' column).
   - Select an appropriate datatype for each column. Make sure you set an appropriate size for any VARCHAR columns.
   - Decide which columns should be set as NOT NULL (i.e. data must be entered).
   - Define an appropriate primary key for each table.
   - Define any foreign keys required to relate the tables.

The listing for each table should be in tabular format as shown in the example below:

Table: Atable		
Column	**Datatype**	**Attributes**
atable_id	INT	PK, NN, AI
atable_somedata	INT	NN FK references othertable.other_id
atable_moredata	VARCHAR(20)	

4. Describe three different **datatypes** that you have used in your design. Using one column as an example of each, explain why you selected that datatype as appropriate for that column.
5. Describe the **relationships** between the data and explain how you have implemented these in your design. For example, how have you used foreign keys to implement one-

to-many relationships? Have you needed to use linking tables to break down many-to-many relationships?

Deliverables to submit for assessment

You should submit the above as a ***single*** document in either in Word or pdf format. (NB. the dropbox will only accept one file.)

Include a coversheet titled 'Introduction to Database Technology TMA' and including: your full name, ITS username, tutor name and submission date

Your file should be named ***yourITSusername*_dtTma** (replacing *yourITSusername* with your actual ITS username).

Completing and submitting the TMA

You should work on your TMA after class and during the self-study session scheduled after Session 4. Begin your work early, as the TMA is a substantial task that requires planning and effort to complete satisfactorily. The TMA prepares you for the FMA so you greatly reduce your risk of a poor overall mark by completing and submitting a TMA.

Getting support

Support for the TMA work will be available in class during Session 4. No tutor support will be given other than at this time.

Submission

The TMA deliverable specified above must be submitted electronically in the Assignment Dropbox in Moodle BEFORE the start of Session 5. (See Moodle for specific deadline dates for your class.)

Notes:

- Documents submitted in formats other than those specified above will not be marked and you will be awarded 0% for this assignment.
- As you are only submitting a single file there is no need for you to zip it.
- If a required file is not submitted, the examiners will not search for missing files and 0% will be awarded for any missing components.

Backing up files

Always keep a back-up copy of all work submitted for assessment in case of unforeseen submission problems.

Getting feedback

Feedback on the marked TMA can be downloaded from Moodle and will normally be returned to you within 2 weeks of submission. The feedback on your TMA and any issues that arise can be discussed with your tutor within 2 weeks of the return of the marked TMA.

Assessment criteria

The list below shows the proportion of the marks (out of 100%) that will be awarded for each component of the assignment. The marking criteria are shown for each component. Use these to check that your work is, as far as possible, of the required standard before submitting it for assessment.

1. **Entity-relationship diagram (20%)**
   - Clearly presented in the specified format
   - Includes all tables required for specification given
   - Correctly represents relationships between the tables
2. **Table descriptions (25%)**
   - Clearly presented in tabular format
   - Includes all tables required for specification given
   - Includes all columns appropriate to each table
   - Appropriate datatypes defined for all columns
   - Primary and foreign keys defined appropriately for each table
   - Columns set to NOT NULL where applicable
3. **Datatype examples (20%)**
   - Three datatypes considered with one example column for each
   - Clear explanation of appropriateness for selected columns
4. **Description of relationships (25%)**
   - Demonstrates understanding of the concept
   - Shows how relationships have been implemented in design submitted
5. **Presentation (10%)**
   - File correctly named
   - Includes all required elements
   - Clear layout and formatting, using sections and headings and including cover sheet
   - Spellchecked and proof-read
   - Clearly written with minimal grammatical errors