

Practical Exam

S6

You must create a database for train scheduling management. The purpose of the database is to contain all the information about the routes of all trains.

- a) The entities of interest for the problem domain are: *Trains*, *Train Types*, *Stations* and *Routes*.
- b) Each train has a name and belongs to a type. The train type has only a description.
- c) Each route has a name, an associated train and a list of stations with the arrival and departure time in each station. The arrival and departure times are represented as an hour/minute pair (ex.: train arrives at 5pm and leaves at 5:10pm).

Your tasks are:

- 1) Write an SQL script to create a relational data model in order to represent the required data. (4 points)
- 2) Create a stored procedure that receives a route, a station, arrival time, departure time and adds the new station to the route. If the station already exists, the arrival and departure times are updated (2 points)
- 3) Create a view that shows name of routes which contain all stations (1 point)
- 4) Create a function that list all stations that have more than 1 train at a given time in the day. (2 points)