

Model for the practical exam

Create a database to manage train schedules. The database will store data about the routes of all the trains. The entities of interest to the problem domain are: *Trains*, *Train Types*, *Stations*, and *Routes*. Each train has a name and belongs to a type. The train type has only a description. Each station has a name. Station names are unique. Each route has a name, an associated train, and a list of stations with arrival and departure times in each station. Route names are unique. The arrival and departure times are represented as hour:minute pairs, e.g., train arrives at 5pm and leaves at 5:10pm.

- 1) Write an SQL script that creates the corresponding relational data model. (4p)
 - 2) Implement a stored procedure that receives a route, a station, arrival and departure times, and adds the station to the route. If the station is already on the route, the arrival and departure times are updated. (1p)
 - 3) Create a view that shows the names of the routes that pass through all the stations. (2p)
 - 4) Implement a function that lists the names of the stations with more than R routes, where $R \geq 1$ is a function parameter. (2 points)
- (1p of)