

Answer 1.1

- a) The query gives the first name, last name, phone and country of the customer who have filed a report with the employees of postal code 'T3B 1Y7'.

$$\begin{aligned} \text{J1} &\leftarrow \rho_{\text{c}}(\text{Customer}) \mid \text{X} \mid \text{c.SupportRepId}=\text{e.EmployeeId} \quad \rho_{\text{e}}(\text{Employee}) \\ \text{S} &\leftarrow \sigma_{\text{e.PostalCode}='T3B 1Y7'}(\text{J1}) \\ \text{P} &\leftarrow \pi_{\text{c.FirstName, c.LastName, c.Phone, c.Country}}(\text{S}) \\ \text{R} &\leftarrow \rho_{\text{c}(\text{cFirst, cLast, cPhone, cCountry})}(\text{P}) \end{aligned}$$

Where 'R' is the final result of the query.

Answer 1.2

- a) The query selects artist name, album name, title name and media type name of all medias whose type is anything other than 'MPEG audio file'.

b)

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SELECT      a.name as artName,
            alb.title as albTitle,
            t.name as tName,
            mt.name as mType
FROM        artist a INNER JOIN album alb
            INNER JOIN track t
            INNER JOIN mediatype mt
            ON t.mediaTypeId=mt.MediaTypeId
            AND t.albumId=alb. albumId
            AND a.ArtistId=alb.ArtistId
WHERE       mt.Name <> 'MPEG audio file'
ORDER BY    a.name ASC,
            tName ASC,
            alb.title ASC
```