מסמך הפעולות באלגברה יחסים

1)

SELECT \*

FROM album

WHERE album\_startRecDate >= ? AND album\_finishRecDate <= ?;

π\*(σ album\_startRecDate=>? AND album\_finishRecDate <= ? (album((

2)

SELECT \*

FROM song

INNER JOIN album ON song.album\_id = album.album\_id

INNER JOIN musician ON album.musician\_id = musician.musician\_id

WHERE song.song\_date >= ? AND song.song\_date <= ? AND musician.musician\_name LIKE ?;

π\*(σ song\_date =>? AND song\_date <= ? (song) AND σ musician\_name Like ?(musician) ) ⨝ album)⨝ musician((

3)

SELECT DISTINCT album.album\_name

FROM song, album

INNER JOIN musician ON album.musician\_id = musician.musician\_id

WHERE song.song\_date >= ? AND song.song\_date <= ? AND musician.musician\_name LIKE ?;

Π album\_name (σsong\_date =>? AND song\_date <= ? (song) AND σ musician\_name Like ?(musician) ⨝musician)⨝ album((

4)

SELECT instrument.instrument\_name, COUNT(\*) as count

FROM song INNER JOIN instrument ON song.instrument\_id = instrument.instrument\_id

GROUP BY instrument\_name

ORDER BY count DESC LIMIT 1;

Π instrument\_name, count (σinstrument\_name ( instrument) ) song⨝))

5)

SELECT DISTINCT instrument.instrument\_name

FROM album INNER JOIN song ON album.album\_id = song.album\_id

INNER JOIN instrument ON song.instrument\_id = instrument.instrument\_id

WHERE album.album\_name = ? ;

Π instrument\_name (σalbum\_name = ? (album)) ⨝ song)⨝ instrument((

6)

SELECT musician.musician\_name, COUNT(\*) AS count

FROM musician

INNER JOIN album ON musician.musician\_id = album.musician\_id

WHERE album\_startRecDate >= ? AND album\_finishRecDate <= ?

GROUP BY musician.musician\_name

ORDER BY count DESC LIMIT 1;

π musician\_name, count (σstartRecDate >= ? AND album\_finishRecDate <= ? (album)) ⨝ musician))

7)

SELECT manufacturer.manufacturer\_name, COUNT(\*) AS count

FROM instrument

INNER JOIN manufacturer ON instrument.manufacturer\_id = manufacturer.manufacturer\_id

INNER JOIN song ON song.instrument\_id = instrument.instrument\_id

GROUP BY manufacturer.manufacturer\_name

ORDER BY count DESC LIMIT 1;

π manufacturer\_name, count (σstartRecDate >= ? AND album\_finishRecDate <= ? (manufacturer) ⨝ song)

8)

SELECT SUM(song.song\_time) / 60 as time FROM song;

πsong\_time(song)/60

9)

SELECT musician.musician\_name, COUNT(\*) AS count

FROM song\_with

INNER JOIN musician ON song\_with.musician\_id = musician.musician\_id

GROUP BY musician.musician\_name

ORDER BY count DESC LIMIT 1;

π musician\_name, count (σ\* (song\_with) ⨝ musician)

10)

SELECT genre.genre\_name, COUNT(\*) AS count

FROM song

INNER JOIN genre ON song.genre\_id = genre.genre\_id

GROUP BY genre.genre\_name

ORDER BY count DESC LIMIT 1"

π musician\_name, count (σ\* (song\_with) ⨝ musician)

11)

SELECT musician.musician\_name, COUNT(song.song\_tech\_id) AS count

FROM musician

INNER JOIN song ON musician.musician\_id = song.song\_tech\_id

WHERE song.song\_date >= ? AND song.song\_date <= ?

GROUP BY musician.musician\_name

ORDER BY count DESC

π musician\_name, count (σsong\_date >= ? AND song\_date <= ? (song) ⨝ musician) ⨝ song)^musician\_name

12)

SELECT album.album\_name, album.album\_finishRecDate

FROM album

ORDER BY album.album\_finishRecDate LIMIT 1;

πalbum\_name, πalbum\_finishRecDate(σ\* (album)^1

13)

SELECT song.song\_id, song.song\_name

FROM song

WHERE song.song\_id = song.song\_id AND song.album\_id != song.album\_id;

πsong\_id,πsong\_name (σsong\_id = σsong\_id & σalbum\_id != σalbum\_id(song))

14)

SELECT musician.musician\_name

FROM musician

INNER JOIN song ON musician.musician\_id = song.song\_tech\_id

INNER JOIN album ON album.album\_id = song.album\_id

π musician\_name(((σ\* (musician) ⨝ song) ⨝ album)

15)

SELECT musician.musician\_name, COUNT(musician.musician\_name) AS count

FROM genre

INNER JOIN song ON genre.genre\_id = song.genre\_id

INNER JOIN album ON song.album\_id = album.album\_id

INNER JOIN musician ON album.musician\_id = musician.musician\_id

GROUP BY musician.musician\_name ORDER BY count DESC;

π musician\_name, count (σ\* (song\_with) ⨝ musician)