

1-List information for films with a rental price over \$4.

$$\sigma_{RentalPrice > 4}(Film)$$

2-List the titles of films with a rental price over \$4.

$$\pi_{Title}(\sigma_{RentalPrice > 4}(Film))$$

3-List outrageously priced films (over \$4 or under \$1).

$$\sigma_{RentalPrice > 4 \text{ or } RentalPrice < 1}(Film)$$

4-List the ID numbers of the films that are expensive<sup>1</sup> and have been reserved.

$$\pi_{FilmID}(\sigma_{RentalPrice > 4}(Film) \bowtie Reserved)$$

5-List the IDs of the expensive films that have not been reserved.

$$\pi_{FilmID}(\sigma_{RentalPrice > 4}(Film) - Reserved)$$

6-List the titles of all reserved films.

$$\sigma_{Title}(Film \bowtie Reserved)$$

7-List the customers who have reserved film(s).

$$\sigma_{CustomerID, Name, Street, City, State, Zipcode}(Customer \bowtie Reserved)$$

8- List the customers who have reserved expensive films.

$$\sigma_{CustomerID, Name, Street, City, State, Zipcode}(\sigma_{RentalPrice > 4}(Film) \bowtie Reserved) \bowtie Customer$$

9- List the streets of customers who have reserved foreign films.

$$\pi_{Street}(\sigma_{kind='foreign film'}(Film) \bowtie Reserved) \bowtie Customer$$

10-List the customers who have reserved all the foreign films.

$$Reserved \div \pi_{FilmID}(\sigma_{kind='foreign film'}(Film))$$

11- Find the film(s) with the highest rental price.

$$\pi(Film) -$$

$$\pi_{R_1.FilmID, R_1.Title, R_1.RentalPrice, R_1.Kind}(\rho_{R_1}(Film) \bowtie_{R_1.RentalPrice < R_2.RentalPrice} \rho_{R_2}(Film))$$