Exercise 1

a)i)

SELECT b.title

FROM books AS b

JOIN authors AS a ON b.author = a.aid

WHERE b.year > 1989 AND a.salary != 1500;

ii)

SELECT genre

FROM (

SELECT b.genre

FROM borrow b

JOIN books ON b.book = books.bid

WHERE b.borrow\_date = '16.05.2024'

GROUP BY b.genre

HAVING COUNT(\*) > 10

AS filtered\_genres;

b)

1) π\* (σlate\_fees = 0 members) ⋈ (σcity != ‘Saarbrücken’ libraries) ⋈ (σmember = mid membership)

2) πavg late\_fees (

Exercise 2

1) SELECT DISTINCT b.car  
 FROM buy b  
 LEFT JOIN repair r ON b.car = r.car AND r.reason = ‘broken clutch’  
 WHERE YEAR(b.date\_of\_purchase) < 2015 AND r.car IS NULL;

2) SELECT m.mid   
 FROM mechanics m  
 JOIN repair r ON m.mid = r.mechanic  
 JOIN cars c ON r.car = c.id  
 GROUP BY m.mid  
 HAVING COUNT(r.start) > 5 AND MAX(DATEDIFF(MONTH, r.start, r.end)) < 6 AND c.horsepower = 250;

1. 1) Find the unique cities and salaries of mechanics who have serviced more than one Volkswagen   
    Golf GTI vehicle

2) Give a list of full names of the top ten earning mechanics, sorted by decreasing age, who earn   
 more than 4000 per year and don’t have the last name Smith.