Вариант 1

1. SELECT s.student\_id, s.fname, s.lname, su.subject\_name

FROM students s

JOIN student\_subject ss ON s.student\_id = ss.student\_id

JOIN subject su ON ss.subject\_id = su.subject\_id

WHERE su.subject\_name = 'Математика';

1. SELECT su.subject\_name

FROM teachers t

JOIN teacher\_subject ts ON t.teacher\_id = ts.teacher\_id

JOIN subject su ON ts.subject\_id = su.subject\_id  
WHERE t.teacher\_id = 1;

1. SELECT s.student\_id, s.fname, s.lname, AVG(m.mark) AS average\_mark

FROM students s

JOIN marks m ON s.student\_id = m.student\_id

WHERE s.student\_id = 1

GROUP BY s.student\_id, s.fname, s.lname;

1. SELECT t.teacher\_id, t.fname, t.lname, AVG(m.mark) AS average\_mark

FROM teachers t

JOIN teacher\_subject ts ON t.teacher\_id = ts.teacher\_id

JOIN marks m ON ts.teacher\_subject\_id = m.teacher\_subject\_id

JOIN students s ON m.student\_id = s.student\_id

GROUP BY t.teacher\_id, t.fname, t.lname

ORDER BY average\_mark DESC;

1. SELECT t.teacher\_id, t.fname, t.lname, COUNT(DISTINCT ts.subject\_id) AS subject\_count

FROM teachers t

JOIN teacher\_subject ts ON t.teacher\_id = ts.teacher\_id

WHERE ts.start\_date >= DATE\_SUB(CURDATE(), INTERVAL 1 YEAR)

GROUP BY t.teacher\_id, t.fname, t.lname

HAVING COUNT(DISTINCT ts.subject\_id) > 3;

2. SELECT su.subject\_name, COUNT(\*)

AS count\_of\_twos

FROM marks m

JOIN teacher\_subject ts ON m.teacher\_subject\_id = ts.teacher\_subject\_id

JOIN subject su ON ts.subject\_id = su.subject\_id

WHERE m.mark = 2 AND m.date\_mark BETWEEN '2023-01-01' AND '2023-06-30'

GROUP BY su.subject\_name

ORDER BY count\_of\_twos DESC;

1. SELECT s.student\_id, s.fname, s.lname, t.teacher\_id, t.fname AS teacher\_fname, t.lname AS teacher\_lname, em.mark, ts.subject\_id

FROM exam\_marks em

JOIN (

SELECT teacher\_subject\_id, MAX(mark) AS max\_mark

FROM exam\_marks

GROUP BY teacher\_subject\_id

) max\_em ON em.teacher\_subject\_id = max\_em.teacher\_subject\_id AND em.mark = max\_em.max\_mark

JOIN teacher\_subject ts ON em.teacher\_subject\_id = ts.teacher\_subject\_id

JOIN teachers t ON ts.teacher\_id = t.teacher\_id

JOIN students s ON em.student\_id = s.student\_id;

1. SELECT s.student\_id, s.fname, s.lname, s.study\_year, AVG(m.mark) AS average\_mark

FROM students s

JOIN marks m ON s.student\_id = m.student\_id

GROUP BY s.student\_id, s.fname, s.lname, s.study\_year

ORDER BY s.student\_id, s.study\_year;

1. SELECT g.group\_number, ts.subject\_id, AVG(m.mark) AS average\_mark

FROM groups g

JOIN students s ON g.group\_id = s.group\_id

JOIN marks m ON s.student\_id = m.student\_id

JOIN teacher\_subject ts ON m.teacher\_subject\_id = ts.teacher\_subject\_id

GROUP BY g.group\_number, ts.subject\_id

HAVING AVG(m.mark) > (

SELECT AVG(m2.mark)

FROM marks m2

JOIN students s2 ON m2.student\_id = s2.student\_id

JOIN teacher\_subject ts2 ON m2.teacher\_subject\_id = ts2.teacher\_subject\_id

WHERE ts2.subject\_id = ts.subject\_id AND s2.group\_id != s.group\_id

1. UPDATE teachers

SET email = 'test@example.com'

WHERE teacher\_id = 1;

1. DELETE FROM subject

WHERE subject\_id = 5;

1. INSERT INTO marks (student\_id, teacher\_subject\_id, mark, date\_mark)

VALUES (1, 2, 4, '2023-03-15');