DB-HW5

Задание 1.

а)

```sql
SELECT surname
FROM readers
WHERE address LIKE '%Москва%';
```

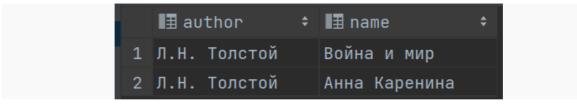|	surname
1	Иванов
2	Петров
3	Кузнецова
4	Смирнов

б)

```sql
SELECT b.author, b.name
FROM readers r
JOIN book_takings bt ON r.id = bt.reader_id
JOIN copies c ON bt.copy_id = c.id
JOIN books b ON c.book_isbn = b.isbn
WHERE r.name = 'Иван' AND r.surname = 'Иванов';
```

	author	name
1	Л.Н. Толстой	Война и мир
2	Л.Н. Толстой	Анна Каренина

в)

```sql
SELECT btc.book_isbn
FROM books_to_categories btc
WHERE btc.category_name = 'Горы'
EXCEPT
SELECT btc.book_isbn
FROM books_to_categories btc
WHERE btc.category_name = 'Путешествия';
```
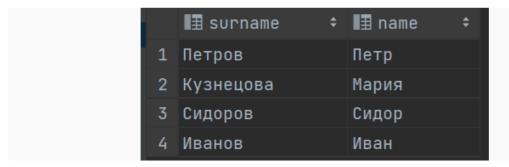
	book_isbn
1	1000000003

г)

```sql
SELECT DISTINCT r.surname, r.name
FROM readers r
JOIN book_takings bt ON r.id = bt.reader_id
WHERE bt.return_date IS NOT NULL;
```

	surname	name
1	Петров	Петр
2	Кузнецова	Мария
3	Сидоров	Сидор
4	Иванов	Иван

д)

```sql
SELECT DISTINCT r.surname, r.name
FROM readers r
JOIN book_takings bt ON r.id = bt.reader_id
WHERE bt.copy_id IN (
  SELECT bt2.copy_id
  FROM book_takings bt2
  JOIN readers r2 ON bt2.reader_id = r2.id
  WHERE r2.name = 'Иван' AND r2.surname = 'Иванов'
) AND r.name != 'Иван' AND r.surname != 'Иванов';
```
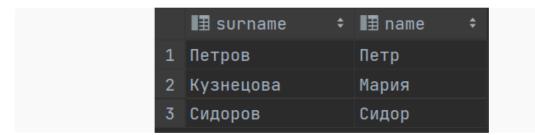
	surname	name
1	Петров	Петр
2	Кузнецова	Мария
3	Сидоров	Сидор

Задание 2

а)

```sql
SELECT c.*
FROM connections c
JOIN stations s1 ON c.departure_station_name = s1.name
JOIN stations s2 ON c.arrival_station_name = s2.name
WHERE s1.lies_in_city_name = 'Москва'
AND s2.lies_in_city_name = 'Тверь';
```

	departure	arrival	departure_station_name	arrival_station_name	train_nr
1	2023-03-01 11:00:00.000000	2023-03-01 12:00:00.000000	Москва-Ярославская.	Тверь-2.	101
2	2023-03-01 10:00:00.000000	2023-03-01 15:00:00.000000	Москва-Ярославская.	Тверь-2.	105
3	2023-03-04 08:00:00.000000	2023-03-04 16:00:00.000000	Москва-Пасс.	Тверь-Пасс.	106

б)

```sql
SELECT DISTINCT
    c1.departure_station_name AS start_station,
    c1.arrival_station_name AS transfer_station,
    c2.arrival_station_name AS final_station,
    c1.departure AS departure_time,
    c2.arrival AS arrival_time
FROM
    connections c1
JOIN
    connections c2 ON c1.arrival_station_name = c2.departure_station_name
WHERE
    c1.departure_station_name = 'Москва-Пасс.'
    AND c2.arrival_station_name = 'Санкт-Петербург-Главный'
    AND DATE(c1.departure) = DATE(c2.arrival)
    AND DATE(c1.departure) = DATE(c1.arrival);
```

start_station	transfer_station	final_station	departure_time	arrival_time
осква-Пасс.	Архангельск-Пасс.	Санкт-Петербург-Главный	2023-03-04 08:00:00.000000	2023-03-04 15:00:00.00000