

# SQL

1. 1. Insert a new book with the following details: book\_id = 101, title = 'The Great Gatsby', author = 'F. Scott Fitzgerald', genre = 'Fiction', price = 10.99

```
22  /*1*/
23  • insert into books values(101,'The Great Gatsby',
24    'F. Scott Fitzgerald','Fiction',10.99);
25  • select * from books;
26
27
28
--
```

| book_id | title                    | author              | genre     | price |
|---------|--------------------------|---------------------|-----------|-------|
| 101     | The Great Gatsby         | F. Scott Fitzgerald | Fiction   | 10.99 |
| 102     | 1984                     | George Orwell       | Dystopian | 12.41 |
| 103     | To Kill a Mockingbird    | Harper Lee          | Fiction   | 15.00 |
| 104     | The Diary of a Young Gir | Anne Frank          | History   | 13.88 |
| 105     | The hunt of red October  | Tome dynse          | Fiction   | 13.09 |
| 106     | Godhan                   | Munshi Premchand    | Drama     | 15.09 |
| 1056    | Karma Bhumi              | Munshi Premchand    | Drama     | 16.09 |
| * NULL  | NULL                     | NULL                | NULL      | NULL  |

2. Update the price of the book with book\_id = 101 to 12.99

```
27  /*2*/
28  • update books set price=10.99 where book_id=101;
29
30
--
```

| book_id | title                    | author              | genre     | price |
|---------|--------------------------|---------------------|-----------|-------|
| 101     | The Great Gatsby         | F. Scott Fitzgerald | Fiction   | 10.99 |
| 102     | 1984                     | George Orwell       | Dystopian | 12.41 |
| 103     | To Kill a Mockingbird    | Harper Lee          | Fiction   | 15.00 |
| 104     | The Diary of a Young Gir | Anne Frank          | History   | 13.88 |
| 105     | The hunt of red October  | Tome dynse          | Fiction   | 13.09 |
| 106     | Godhan                   | Munshi Premchand    | Drama     | 15.09 |
| 1056    | Karma Bhumi              | Munshi Premchand    | Drama     | 16.09 |
| * NULL  | NULL                     | NULL                | NULL      | NULL  |

3. Delete the book with book\_id = 101.

```
33  /*3*/
34  • delete from books where book_id=101;
35
36
```

| book_id | title                    | author           | genre     | price |
|---------|--------------------------|------------------|-----------|-------|
| 102     | 1984                     | George Orwell    | Dystopian | 12.41 |
| 103     | To Kill a Mockingbird    | Harper Lee       | Fiction   | 15.00 |
| 104     | The Diary of a Young Gir | Anne Frank       | History   | 13.88 |
| 105     | The hunt of red October  | Tome dlynse      | Fiction   | 13.09 |
| 106     | Godhan                   | Munshi Premchand | Drama     | 15.09 |
| 1056    | Karma Bhumi              | Munshi Premchand | Drama     | 16.09 |
| NULL    | NULL                     | NULL             | NULL      | NULL  |

4. Insert a new member with the following details: member\_id = 201, member\_name = 'Jane Doe', membership\_date = '2024-01-01'.

```
36  /*4*/
37  • insert into members values(210,'Jane Doe','2024-01-01');
--
```

| member_id | member_name | membership_date |
|-----------|-------------|-----------------|
| 202       | Harry       | 2024-01-01      |
| 203       | Michel      | 2024-01-10      |
| 204       | Trevor      | 2024-02-01      |
| 205       | Franklin    | 2024-10-21      |
| 210       | Jane Doe    | 2024-01-01      |
| NULL      | NULL        | NULL            |

5. Update the membership\_date of the member with member\_id = 201 to '2024-02-01

```
39  /*5*/
40  • update members set membership_date='2024-02-01' where
41    member_id=201;
42
43
```

| member_id | member_name | membership_date |
|-----------|-------------|-----------------|
| 202       | Harry       | 2024-01-01      |
| 203       | Michel      | 2024-01-10      |
| 204       | Trevor      | 2024-02-01      |
| 205       | Franklin    | 2024-10-21      |
| 210       | Jane Doe    | 2024-01-01      |
| NULL      | NULL        | NULL            |

6. Delete the member with member\_id = 201

```
42  /*6*/
43  • delete from members where member_id=201;
--
```

| member_id | member_name | membership_date |
|-----------|-------------|-----------------|
| 202       | Harry       | 2024-01-01      |
| 203       | Michel      | 2024-01-10      |
| 204       | Trevor      | 2024-02-01      |
| 205       | Franklin    | 2024-10-21      |
| 210       | Jane Doe    | 2024-01-01      |
| NULL      | NULL        | NULL            |

7. Insert a new borrowed book record with the following details: borrow\_id = 301, member\_id = 202, book\_id = 102, borrow\_date = '2024-07-01', return\_date = NULL

```
53  /*7*/
54  • insert into borrowed_books values(301,202,102,'2024-07-01',null);
55
```

Result Grid

| borrow_id | member_id | book_id | borrow_date | return_date |
|-----------|-----------|---------|-------------|-------------|
| 301       | 202       | 102     | 2024-07-01  | NULL        |
| 302       | 210       | 103     | 2024-08-01  | NULL        |
| 303       | 202       | 104     | 2024-07-01  | NULL        |
| NULL      | NULL      | NULL    | NULL        | NULL        |

8. Update the return\_date of the borrowed book record with borrow\_id = 301 to '2024-07-15'

```
56  /*8*/
57  • update borrowed_books set return_date='2024-07-15' where
58    borrow_id=301;
```

Result Grid

| borrow_id | member_id | book_id | borrow_date | return_date |
|-----------|-----------|---------|-------------|-------------|
| 301       | 202       | 102     | 2024-07-01  | NULL        |
| 302       | 210       | 103     | 2024-08-01  | NULL        |
| 303       | 202       | 104     | 2024-07-01  | NULL        |
| NULL      | NULL      | NULL    | NULL        | NULL        |

9. Delete the borrowed book record with borrow\_id = 301.

```
60  /*9*/
61  • delete from borrowed_books where borrow_id=301;
62
```

Result Grid

| borrow_id | member_id | book_id | borrow_date | return_date |
|-----------|-----------|---------|-------------|-------------|
| 302       | 210       | 103     | 2024-08-01  | NULL        |
| 303       | 202       | 104     | 2024-07-01  | NULL        |
| NULL      | NULL      | NULL    | NULL        | NULL        |

10. Count the total number of books.

```
51  /*10*/
52  • select count(book_id) from books;
53
```

Result Grid

| count(book_id) |
|----------------|
| 4              |

11. Count the total number of members.

```
53 /*11*/
54 • select count(member_id) from members;
55
56 /*12*/
```

Result Grid | Filter Rows: | Export:

| count(member_id) |
|------------------|
| 5                |

12. Count the total number of borrowed book records.

```
55 /*12*/
56 • select count(borrow_id) from borrowed_books;
--
```

Result Grid | Filter Rows: | Export: | Wrap C

| count(borrow_id) |
|------------------|
| 3                |

13. Find the average price of books in the 'Fiction' genre.

```
65 /*13*/
66 • select avg(price) as average_price
67 from books
68 where genre='Fiction';
--
```

Result Grid | Filter Rows: | Export:

| average_price |
|---------------|
| 14.045000     |

14. Find the total number of books borrowed by each member

```
73 /*14*/
74 • select member_id, count(book_id)
75 as total_books_borrowed
76 from borrowed_books
77 group by member_id;
--
```

Result Grid | Filter Rows: | Exp

| title                   |
|-------------------------|
| To Kill a Mockingbird   |
| The hunt of red October |

15. Find all books in the 'Fiction' genre

```
78 /*15*/
79 • select title from books
80 where genre= 'Fiction';
--
```

Result Grid | Filter Rows: | Exp

| title                   |
|-------------------------|
| To Kill a Mockingbird   |
| The hunt of red October |

16. Find all members who joined after '2024-01-01'

```
81  /*16*/
82  • select member_id,member_name
83  from members
84  where membership_date > '2024-01-01';
```

Result Grid

| member_id | member_name |
|-----------|-------------|
| 203       | Michel      |
| 204       | Trevor      |
| 205       | Franklin    |
| NULL      | NULL        |

17. Find all borrowed book records where the borrow\_date is '2024-07-01'.

```
85  /*17*/
86  • SELECT *
87  FROM borrowed_books
88  WHERE borrow_date = '2024-07-01';
```

Result Grid

| borrow_id | member_id | book_id | borrow_date | return_date |
|-----------|-----------|---------|-------------|-------------|
| 301       | 202       | 102     | 2024-07-01  | NULL        |
| 303       | 202       | 104     | 2024-07-01  | NULL        |
| NULL      | NULL      | NULL    | NULL        | NULL        |

18. Sort books by price in ascending order.

```
97  /*18*/
98  • select *
99  from books
100  order by price asc;
```

Result Grid

| book_id | title                    | author        | genre     | price |
|---------|--------------------------|---------------|-----------|-------|
| 102     | 1984                     | George Orwell | Dystopian | 12.41 |
| 105     | The hunt of red October  | Tome dlynse   | Fiction   | 13.09 |
| 104     | The Diary of a Young Gir | Anne Frank    | History   | 13.88 |
| 103     | To Kill a Mockingbird    | Harper Lee    | Fiction   | 15.00 |
| NULL    | NULL                     | NULL          | NULL      | NULL  |

19. Sort members by name in alphabetical order.

```
102  /*19*/
103  • select *
104  from members
105  order by member_name asc;
```

Result Grid

| member_id | member_name | membership_date |
|-----------|-------------|-----------------|
| 205       | Franklin    | 2024-10-21      |
| 202       | Harry       | 2024-01-01      |
| 210       | Jane Doe    | 2024-01-01      |
| 203       | Michel      | 2024-01-10      |
| 204       | Trevor      | 2024-02-01      |
| NULL      | NULL        | NULL            |

20. Find the top 5 most expensive books.

```
111  /*20*/
112  • select title,price
113    from books
114    order by price desc
115    limit 5;
```

| Result Grid              |       | Filter Rows: | Export |
|--------------------------|-------|--------------|--------|
| title                    | price |              |        |
| Karma Bhumi              | 16.09 |              |        |
| Godhan                   | 15.09 |              |        |
| To Kill a Mockingbird    | 15.00 |              |        |
| The Diary of a Young Gir | 13.88 |              |        |
| The hunt of red October  | 13.09 |              |        |

21. . Find members whose names start with 'J'.

```
117  /*21*/
118  • select member_name
119    from members
120    where member_name like 'J%';
```

| Result Grid |  | Filter Rows: | Export |
|-------------|--|--------------|--------|
| member_name |  |              |        |
| Jane Doe    |  |              |        |

22. Find books with prices between 5 and 20.

```
122  /*22*/
123  • select title
124    from books
125    where price>5
126    and price<20;
127  • select title
128    from books where price between 5 and 20;
```

| Result Grid              |  | Filter Rows: | Export | Wrap |
|--------------------------|--|--------------|--------|------|
| title                    |  |              |        |      |
| 1984                     |  |              |        |      |
| To Kill a Mockingbird    |  |              |        |      |
| The Diary of a Young Gir |  |              |        |      |
| The hunt of red October  |  |              |        |      |
| Godhan                   |  |              |        |      |
| Karma Bhumi              |  |              |        |      |

### 23. Find members who have borrowed at least one book

```
130      /*23*/
131 • select distinct m.member_id, m.member_name
132      from members m
133      inner join borrowed_books b on m.member_id=b.member_id;
---
```

Result Grid

| member_id | member_name |
|-----------|-------------|
| 202       | Harry       |
| 210       | Jane Doe    |

### 24. Find books that have not been borrowed yet.

```
135      /*24*/
136 • select book_id,title,author,genre
137      from books
138      where book_id not in (select distinct book_id from borrowed_books);
---
```

Result Grid

| book_id | title                   | author           | genre   |
|---------|-------------------------|------------------|---------|
| 105     | The hunt of red October | Tome dlynse      | Fiction |
| 106     | Godhan                  | Munshi Premchand | Drama   |
| 1056    | Karma Bhumi             | Munshi Premchand | Drama   |
| NULL    | NULL                    | NULL             | NULL    |

### 25. Find the total amount spent on borrowed books by each member (considering book price)

```
140      /*25*/
141 • select m.member_id,m.member_name,
142      sum(b.price)
143      as total_amount_spend
144      from members m
145      join borrowed_books bb on m.member_id=bb.member_id
146      join books b on bb.book_id=b.book_id group by m.member_id,m.member_name;
---
```

Result Grid

| member_id | member_name | total_amount_spend |
|-----------|-------------|--------------------|
| 202       | Harry       | 26.29              |
| 210       | Jane Doe    | 15.00              |