

SQL TASK 2

1. Display the first name, last name of characters, and the title of the book they are associated with.

The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left displays the 'hogwarts' database schema, including tables 'characters' and 'library'. The 'Query 1' editor in the center contains the following SQL query:

```
1 • SELECT * FROM hogwarts.library;  
2  
3 • select fname, lname, book_name  
4 from hogwarts.characters  
5 inner join hogwarts.library  
6 on hogwarts.characters.char_id = hogwarts.library.char_id;
```

The 'Result Grid' at the bottom displays the query results in a table with three columns: 'fname', 'lname', and 'book_name'. The data is as follows:

fname	lname	book_name
Harry	Potter	Magical Water Plants Of The Highland Rocks
Hermione	Granger	A History Of Magic
Ron	Weasley	Advanced Potion-Making
Draco	Malfoy	Fantastic Beasts And Where To Find Them
Vincent	Crabbe	Fantastic Beasts And Where To Find Them
Gregory	Goyle	Hogwarts: A History
Albus	Dumbledore	Quidditch Through The Ages
Luna	Lovegood	Quidditch Through The Ages
Cedric	Diggory	The Lockhart Collection

The 'Information' pane on the left shows the definition for the 'char_id' column: 'Column: char_id' and 'Definition: char_id int'. The 'SQL Additions' pane on the right contains a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

2. Display the first name, last name of characters, and the title of the book they are associated with, regardless of whether they have any books or not.

The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left displays the 'hogwarts' database schema, including tables 'characters' and 'library', and columns 'lib_id', 'char_id', 'book_name', 'start_date', 'end_date', and 'book_id'. The 'Information' pane at the bottom left shows the definition for the 'char_id' column as an integer.

The 'Query 1' editor in the center contains the following SQL query:

```
1 • SELECT * FROM hogwarts.library;  
2  
3 • select fname, lname, book_name  
4 from hogwarts.characters  
5 left join hogwarts.library  
6 on hogwarts.characters.char_id = hogwarts.library.char_id;
```

The 'Result Grid' at the bottom displays the results of the query, showing a list of characters and their associated book titles. The grid has columns for 'fname', 'lname', and 'book_name'. The data is as follows:

fname	lname	book_name
Harry	Potter	Magical Water Plants Of The Highland Rocks
Hermione	Granger	A History Of Magic
Ron	Weasley	Advanced Potion-Making
Draco	Malfoy	Fantastic Beasts And Where To Find Them
Vincent	Crabbe	Fantastic Beasts And Where To Find Them
Gregory	Goyle	Hogwarts: A History
Albus	Dumbledore	Quidditch Through The Ages
Luna	Lovegood	Quidditch Through The Ages
Cedric	Diggory	The Lockhart Collection

The 'SQL Additions' pane on the right contains a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

3. Display the title of the book and the name of the patronus, regardless of whether there is information about the book holder in the table or not.

The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left displays the 'hogwarts' database schema, including tables 'characters' and 'library', and columns like 'lib_id', 'char_id', 'book_name', 'start_date', 'end_date', and 'book_id'. The 'Query 1' editor in the center contains the following SQL query:

```
1 SELECT * FROM hogwarts.library;
2
3 select book_name, patronus
4 from hogwarts.characters
5 right join hogwarts.library
6 on hogwarts.characters.char_id = hogwarts.library.char_id;
```

The 'Result Grid' at the bottom displays the query results. The first row shows 'Hogwarts: A History' with a NULL patronus. The second row shows 'Quidditch Through The Ages' with a patronus of 'Phoenix'. The third row shows 'The Lockhart Collection' with a patronus of 'Unknown'. The fourth row shows 'Moste Potente Potions' with a patronus of 'Doe'. The fifth row shows 'The Life And Lies Of Albus Dumbledore' with a NULL patronus. The sixth row shows 'Fantastic Beasts And Where To Find Them' with a NULL patronus. The seventh row shows 'The Tales Of Beadle The Bard' with a NULL patronus. The eighth row shows 'Advanced Potion-Making' with a patronus of 'Jack Russell terrier'. The ninth row shows 'A History Of Magic' with a patronus of 'Otter'. The tenth row shows 'Magical Water Plants Of The Highland Bogies' with a patronus of 'Star'.

book_name	patronus
Hogwarts: A History	NULL
Quidditch Through The Ages	Phoenix
The Lockhart Collection	Unknown
Moste Potente Potions	Doe
The Life And Lies Of Albus Dumbledore	NULL
Fantastic Beasts And Where To Find Them	NULL
The Tales Of Beadle The Bard	NULL
Advanced Potion-Making	Jack Russell terrier
A History Of Magic	Otter
Magical Water Plants Of The Highland Bogies	Star

4. Display the first name, last name, age of characters, and the title of the book they are associated with, under the condition that all book owners must be older than 15 years old.

The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left displays the 'hogwarts' database schema, including tables 'characters' and 'library', and columns 'lib_id', 'char_id', 'book_name', 'start_date', 'end_date', and 'book_id'. The 'Query 1' editor in the center contains the following SQL query:

```
1 • SELECT * FROM hogwarts.library;
2
3 • select fname, lname, age, book_name
4 from hogwarts.characters
5 inner join hogwarts.library
6 on hogwarts.characters.char_id = hogwarts.library.char_id
7 where age > 15;
```

The 'Result Grid' pane at the bottom displays the query results in a table format:

fname	lname	age	book_name
Albus	Dumbledore	111	Quidditch Through The Ages
Severus	Snape	55	Moste Potente Potions

The 'Information' pane on the left shows the column definition for 'char_id' as an integer.

The 'SQL Additions' pane on the right displays a message: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help."

The 'Output' pane at the bottom shows the 'Action Output' tab.

5. Display the character's name, book title, issue date, and completion date, under the condition that they are younger than 15 years old and their patronus is unknown.

The screenshot shows the MySQL Workbench interface. The left sidebar contains the 'Navigator' pane with a tree view of the 'hogwarts' database schema, including tables 'characters' and 'library', and their columns. The 'Information' pane at the bottom left shows the definition for the 'start_date' column as a 'date' type. The main 'Query Editor' pane displays a SQL query:

```
1 • SELECT * FROM hogwarts.library;
2
3 • select book_name, start_date, end_date
4   from hogwarts.characters
5  inner join hogwarts.library
6    on hogwarts.characters.char_id = hogwarts.library.char_id
7  where age < 15 and patronus = "Unknown";
```

 The 'Result Grid' pane at the bottom shows the results of the query, with columns 'book_name', 'start_date', and 'end_date'. The first row of data is 'The Lockhart Collection', '2015-12-20', and '2030-12-20'. The right sidebar contains the 'SQL Additions' pane with a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

MySQL Workbench

Local instance MySQL80 - W...

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

hogwarts

Tables

characters

library

Columns

lib_id

char_id

book_name

start_date

end_date

book_id

Indexes

PRIMARY

char_id_idx

Administration Schemas

Information

Column: start_date

Definition: start_date date

Query 1 library

Limit to 1000 rows

```
1 • SELECT * FROM hogwarts.library;
2
3 • select book_name, start_date, end_date
4   from hogwarts.characters
5  inner join hogwarts.library
6    on hogwarts.characters.char_id = hogwarts.library.char_id
7  where age < 15 and patronus = "Unknown";
```

Result Grid

book_name	start_date	end_date
The Lockhart Collection	2015-12-20	2030-12-20

Result 6 x

Read Only Context Help Snippets

SQL Additions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

6. Using a nested query, find the count of books that have an end_date greater than the end_date of Hermione.

The screenshot shows the MySQL Workbench interface. The left sidebar contains the 'Navigator' panel with a tree view of the 'hogwarts' database schema, including tables 'characters' and 'library', and columns 'lib_id', 'char_id', 'book_name', 'start_date', 'end_date', and 'book_id'. The 'Information' panel below it shows the definition for the 'start_date' column as 'date'. The main editor window, titled 'Query 1', contains the following SQL code:

```
1 SELECT * FROM hogwarts.library;  
2  
3 select count(book_id)  
4 from hogwarts.library  
5 where end_date > (select end_date  
6 from hogwarts.library  
7 where char_id = 2);
```

The query is executed, and the 'Result Grid' at the bottom shows a single row with the value '2' under the column 'count(book_id)'. The right sidebar contains the 'SQL Additions' panel with a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

count(book_id)
2

7. Using a nested query, display the names of all patronuses whose owners are older than the age of the character with an unknown patronus.

The screenshot shows the MySQL Workbench interface. The 'Navigator' pane on the left displays the 'hogwarts' database schema, including tables 'characters' and 'library', and columns like 'lib_id', 'char_id', 'book_name', 'start_date', 'end_date', and 'book_id'. The 'Query 1' editor in the center contains the following SQL query:

```
1 SELECT * FROM hogwarts.library;  
2  
3 select patronus  
4 from hogwarts.characters  
5 where age > (select age  
6 from hogwarts.characters  
7 where patronus = "Unknown");
```

The 'Result Grid' pane at the bottom shows the results of the query, displaying a table with two rows:

patronus
Phoenix
Doe

The 'Information' pane on the left provides details for the 'book_name' column: Column: book_name, Collation: utf8mb4_0900_ai_ci, Definition: book_name varchar(45). The 'SQL Additions' pane on the right contains a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'