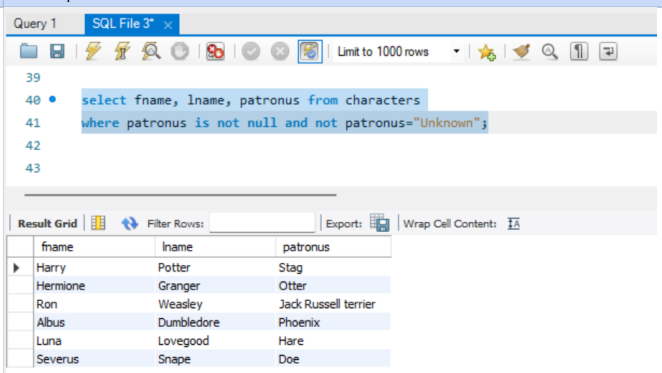
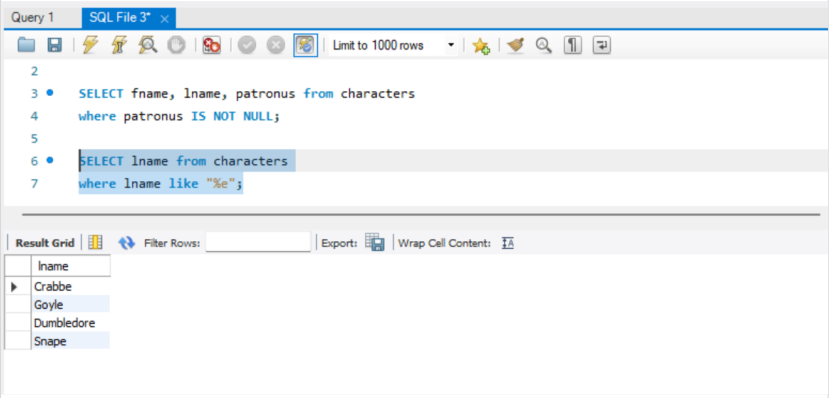
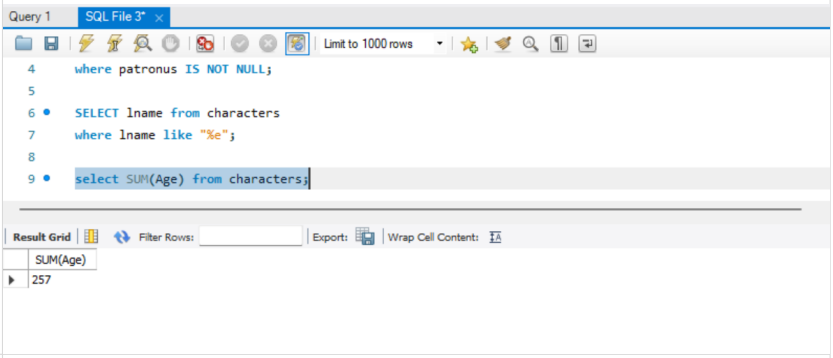
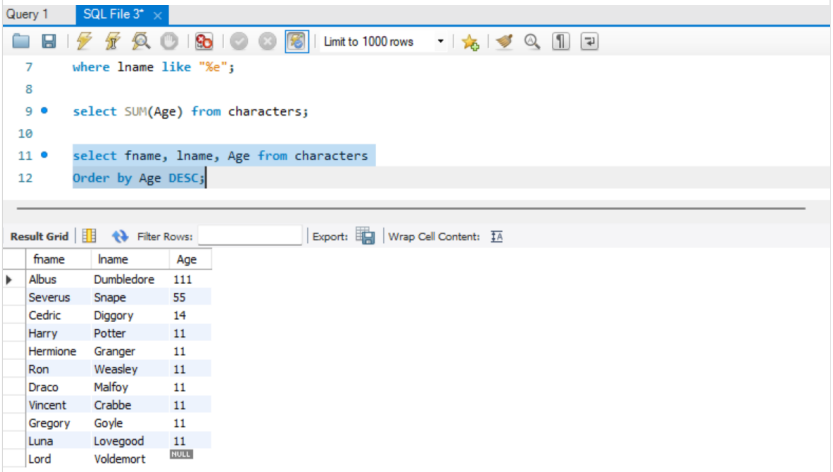
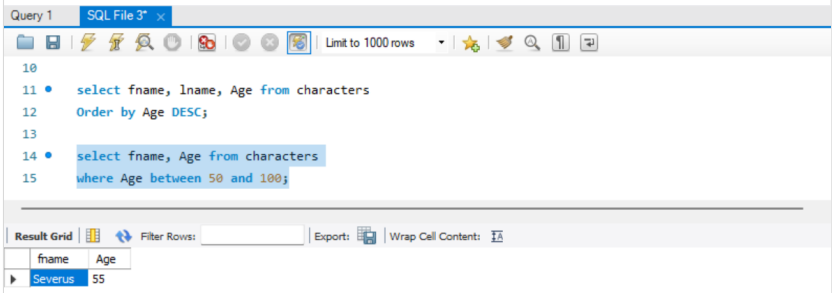
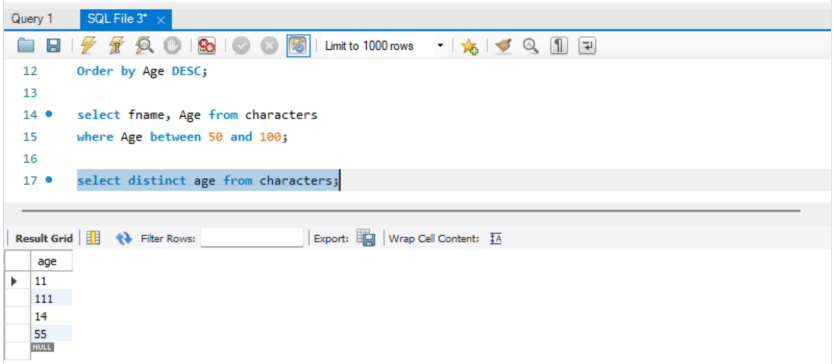
"Characters" table querrys	
Task	Solution print screen
1. Print first name, last name, patronus of all characters that have patronus and it is known	
2. Print the last name of the characters whose last letter is 'e'	
3. Calculate the total age of all characters and display it on the screen	
4. Print the first name, last name and age of the characters in descending order of their age	

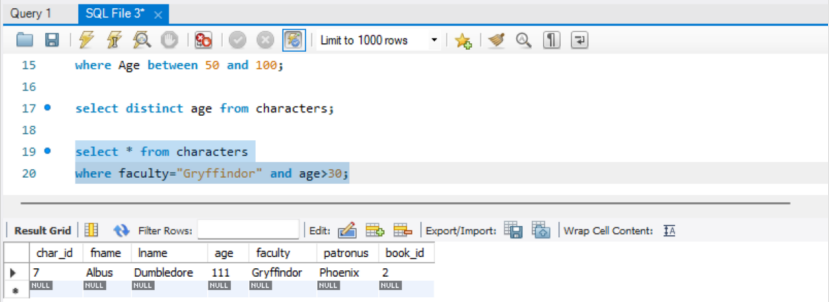
5. Print the character's name and age, whose age is between 50 and 100 years old



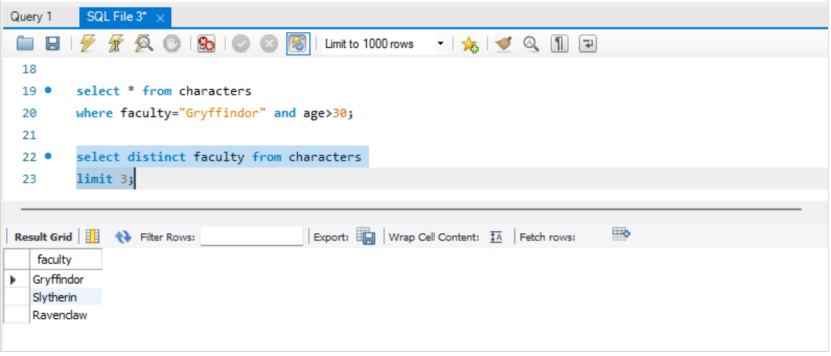
6.Print the age of all the characters so that there are no ones among them who have the same age



7. Print all information about characters whose faculty = Gryffindor and who are over 30 years old



8. Print the names of the first three faculties from the table so that the faculties do not repeat



9. Print names of all characters whose name starts with 'H' and consists of 5 letters, or whose name starts with 'L'

```
21
22 •  select distinct faculty from characters
23    limit 3;
24
25 •  select fname from characters
26    where fname like "H____" or fname like "L%";
```

fname
Harry
Luna
Lord

10. Calculate the average age of all characters

```
23    limit 3;
24
25 •  select fname from characters
26    where fname like "H____" or fname like "L%";
27
28 •  select avg(age) from characters;
```

avg(age)
25.7000

11. Delete character with ID = 11

```
28 •  select avg(age) from characters;
29
30 •  delete from characters
31    where char_id=11;
32
33 •  select * from characters;
```

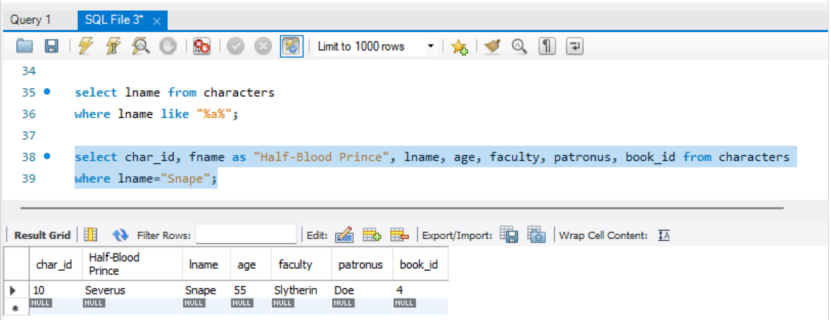
char_id	fname	lname	age	faculty	patronus	book_id
1	Harry	Potter	11	Gryffindor	Stag	10
2	Hermione	Granger	11	Gryffindor	Otter	9
3	Ron	Weasley	11	Gryffindor	Jack Russell terrier	8
4	Draco	Malfoy	11	Slytherin	NULL	6
5	Vincent	Crabbe	11	Slytherin	NULL	6
6	Gregory	Goyle	11	Slytherin	NULL	1
7	Albus	Dumbledore	111	Gryffindor	Phoenix	2
8	Luna	Lovegood	11	Ravenclaw	Hare	2
9	Cedric	Diggory	14	Hufflepuff	Unknown	3
10	Severus	Snape	55	Slytherin	Doe	4
NULL	NULL	NULL	NULL	NULL	NULL	NULL

12. Print the last name of all characters that contain the letter 'a' in it

```
31    where char_id=11;
32
33 •  select * from characters;
34
35 •  select lname from characters
36    where lname like "%a%";
```

lname
Granger
Weasley
Malfoy
Crabbe
Snape

13. Use an alias to temporarily replace the column name fname to Half-Blood Prince and show real Half-Blood Prince

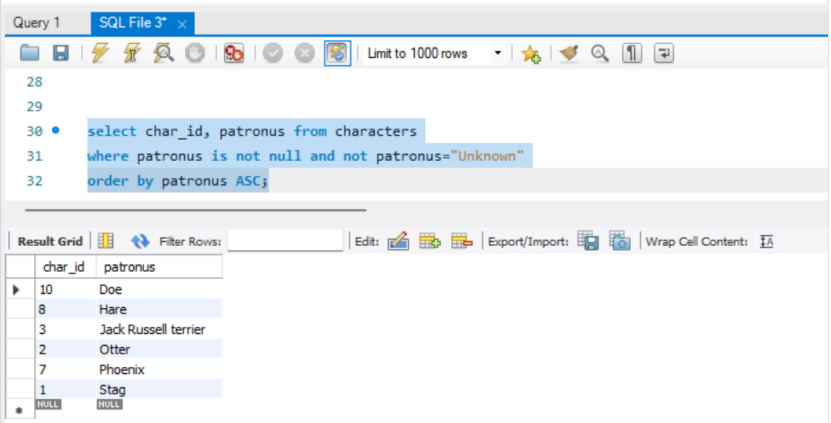


```
select lname from characters
where lname like "%a%";

select char_id, fname as "Half-Blood Prince", lname, age, faculty, patronus, book_id from characters
where lname="Snape";
```

char_id	Half-Blood Prince	lname	age	faculty	patronus	book_id
10	Severus	Snape	55	Slytherin	Doe	4

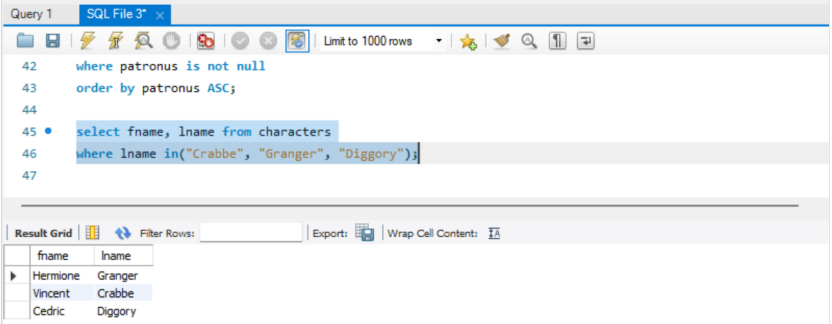
14. Print the id and names in alphabetical order of whose Patronuses, who exist or are known



```
select char_id, patronus from characters
where patronus is not null and not patronus="Unknown"
order by patronus ASC;
```

char_id	patronus
10	Doe
8	Hare
3	Jack Russell terrier
2	Otter
7	Phoenix
1	Stag

15. Using the IN operator, print the first and last names of those characters whose last name is Crabbe, Granger, or Diggory

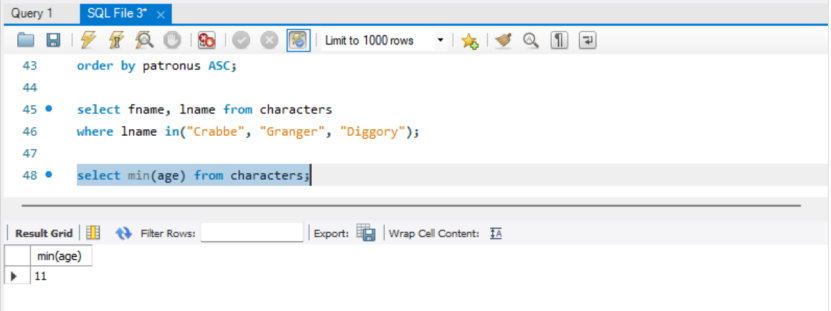


```
where patronus is not null
order by patronus ASC;

select fname, lname from characters
where lname in("Crabbe", "Granger", "Diggory");
```

fname	lname
Hermione	Granger
Vincent	Crabbe
Cedric	Diggory

16. Print the minimum age of the character



```
order by patronus ASC;

select fname, lname from characters
where lname in("Crabbe", "Granger", "Diggory");

select min(age) from characters;
```

min(age)
11

17. Using UNION operator select names from the characters table and book titles from library table

```
47
48  select min(age) from characters;
49
50  select fname from characters
51  union
52  select book_name from library;
```

Result Grid

fname
Harry
Hermione
Ron
Draco
Vincent
Gregory
Albus
Luna
Cedric
Severus
Hogwarts: A History
Quidditch Through The Ages
The Lockhart Collection
Moste Potente Potions
The Life And Lies Of Albus Dumbledore
Fantastic Beasts And Where To Find Them
The Tales Of Beadle The Bard
Advanced Potion-Making
A History Of Magic
Magical Water Plants Of The Highland Rocks

18. Using HAVING operator, count the number of characters in each department, keeping only those departments where the number of students is greater than 1

```
52  select book_name from library;
53
54  select count(char_id), faculty
55  from characters
56  group by faculty
57  having count(char_id)>1;
```

Result Grid

count(char_id)	faculty
4	Gryffindor
4	Slytherin

19. Using the CASE statement, describe the following logic. Print the character's first and last name, as well as the following text message:

- If the faculty is Gryffindor, then Godric should be displayed in the console

- If the faculty is Slytherin, then Salazar should be displayed in the console

- If the faculty is Ravenclaw, then Rowena should be displayed in the console

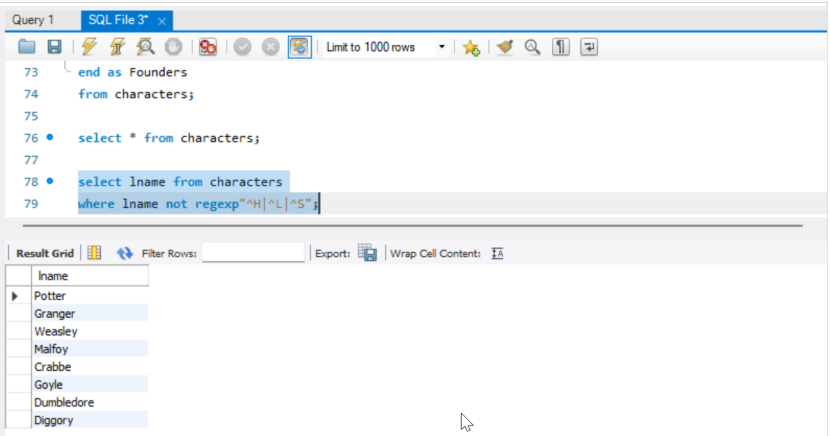
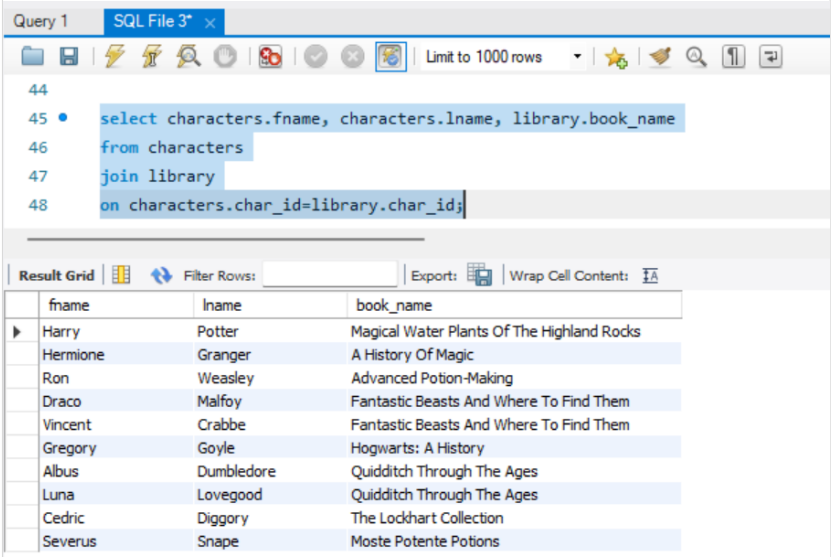
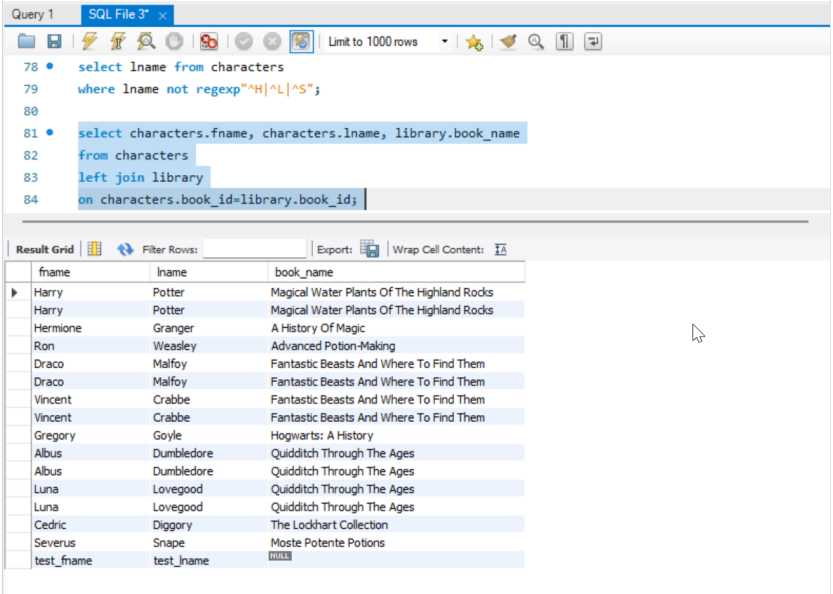
- If the faculty is Hufflepuff, then Helga should be displayed in the console

- If other information, then Muggle is displayed

```
63  group by faculty
64  having count(char_id)>1;
65
66  select fname, lname,
67  case
68  when faculty="Gryffindor" then "Godric"
69  when faculty="Slytherin" then "Salazar"
70  when faculty="Ravenclaw" then "Rowena"
71  when faculty="Hufflepuff" then "Helga"
72  when faculty not in("Gryffindor", "Slytherin", "Ravenclaw", "Hufflepuff" ) then "Mugle"
73  end as Founders
74  from characters;
```

Result Grid

fname	lname	Founders
Harry	Potter	Godric
Hermione	Granger	Godric
Ron	Weasley	Godric
Draco	Malfoy	Salazar
Vincent	Crabbe	Salazar
Gregory	Goyle	Salazar
Albus	Dumbledore	Godric
Luna	Lovegood	Rowena
Cedric	Diggory	Helga
Severus	Snape	Salazar
test_fname	test_lname	Mugle

20. Using a regular expression, find the last names of characters that do not start with the letters H, L or S and print them	
Joins / Library table + Characters table	
Task	Solution print screen
1. Print the first and last names of the characters and the title of the book they have	
2. Print the first name, last name of the characters, and the title of the book, regardless of whether they have books or not	

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

Query 1 | SQL File 3*

Limit to 1000 rows

```
44
45 •  select library.book_name, characters.patronus
46    from library
47    left join characters
48    on library.char_id=characters.char_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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 Rocks	Stag
Quidditch Through The Ages	Hare
Magical Water Plants Of The Highland Rocks	NULL
Fantastic Beasts And Where To Find Them	NULL

4. Print the first name, last name, age of the characters and the title of the book they have, provided that all book owners must be over 15 years old (see next page)

Query 1 | SQL File 3*

Limit to 1000 rows

```
49
50 •  select characters.fname, characters.lname, characters.age, library.book_name
51    from characters
52    join library
53    on characters.char_id=library.char_id
54    where age>15;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

5. Print the character's name, book title, issue date, and completion date, assuming they are under 15 and their patronus is unknown

Query 1 | SQL File 3*

Limit to 1000 rows

```
48    on library.char_id=characters.char_id;
49
50 •  select characters.fname, library.book_name, library.start_date, library.end_date
51    from characters
52    join library
53    on characters.char_id=library.char_id
54    where age<15 and patronus="Unknown";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

6. Using a nested query, print the number of books where end_date is greater than Hermione's end_date

Query 1 | SQL File 3*

Limit to 1000 rows

```
18    on characters.char_id=library.char_id
19    where age<15 and patronus IS NULL;
20
21 •  select count(book_id) from library where end_date>
22    (select end_date from library where char_id in
23    (select char_id from characters where fname="Hermione")
24    );
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

count(book_id)
2

7. Use a subquery to print the names of all Patronuses whose owners are older than the age of the character whose Patronus is Unknown