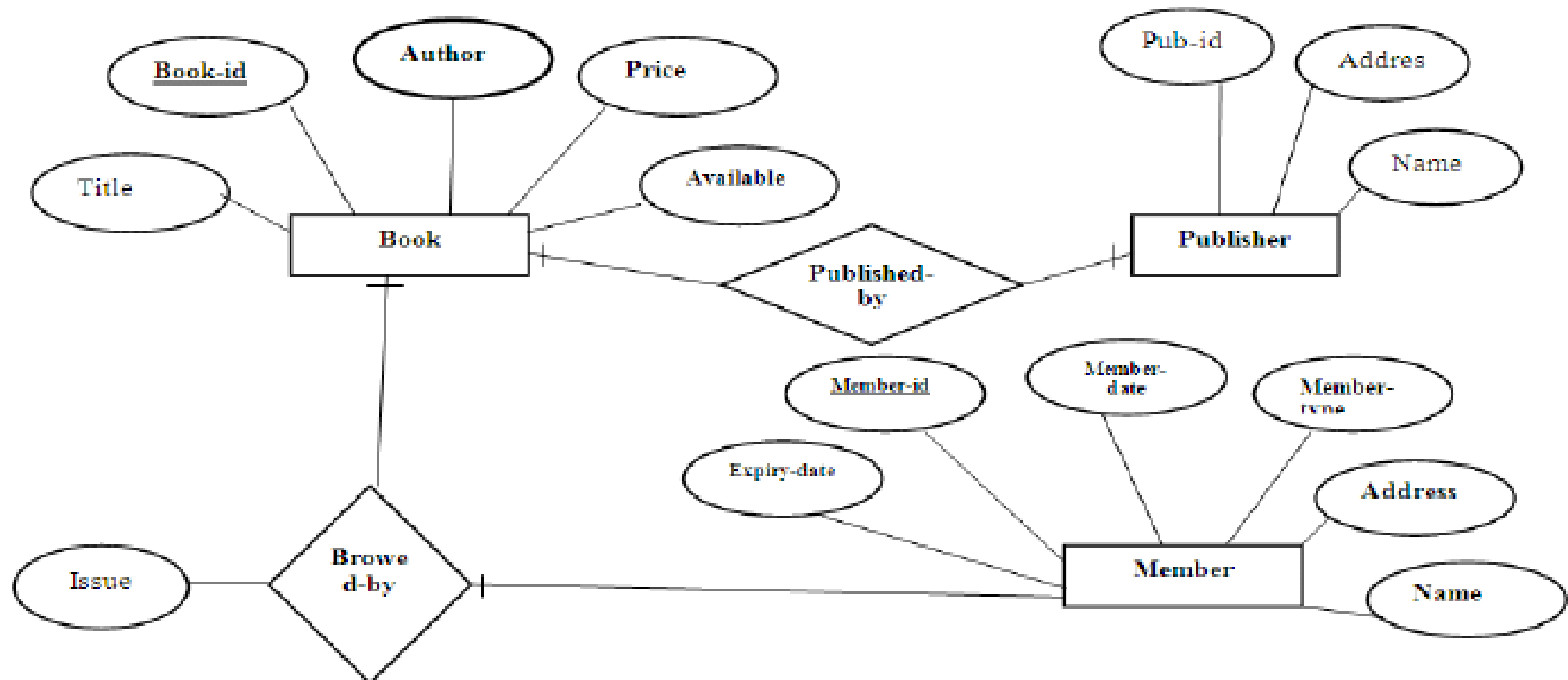


Problem statement:
Smart Library Management
System

ER Diagram -



Innovativeness

- With conventional methods, we have to manage books manually in a library. Issuing and returning of book consumes lot of time by searching pages in register.
- Next phase comes where we have used database for managing all records. But with database also, we have to manually search (by typing) whether book is available?
- So we came with better solution. With this solution, we can directly search whether book is available or not just by saying its name. Additionally, if book is available, software will search online for its genre and will tell us.

Sample prototype

Sample Database

MySQL Workbench

unconnected x Local instance MySQL Router...

File Edit View Query Database Server Tools Scripting Help

Navigator: library_database x

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

SCHEMAS

Information

No object selected

SQLAdditions:

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

```
1 • show databases;
2 • create database library;
3 • use library;
4 • create table book(bid integer primary key auto_increment,bname varchar(50));
5 • insert into book(bname) values('rich dad poor dad');
6 • select * from book;
7 • insert into book(bname) values('the alchemist');
8 • insert into book(bname) values('a tale of two cities');
9 • insert into book(bname) values('the fault in our stars');
10 • insert into book(bname) values('wings of fire');
11 • insert into book(bname) values('the story of my experiment with truth');
```

Result Grid

	bid	bname
▶	1	rich dad poor dad
	2	the alchemist
	3	a tale of two cities
	4	the fault in our stars
	5	wings of fire
	6	the story of my experiment with truth
*	NULL	NULL

book 4 x

Output

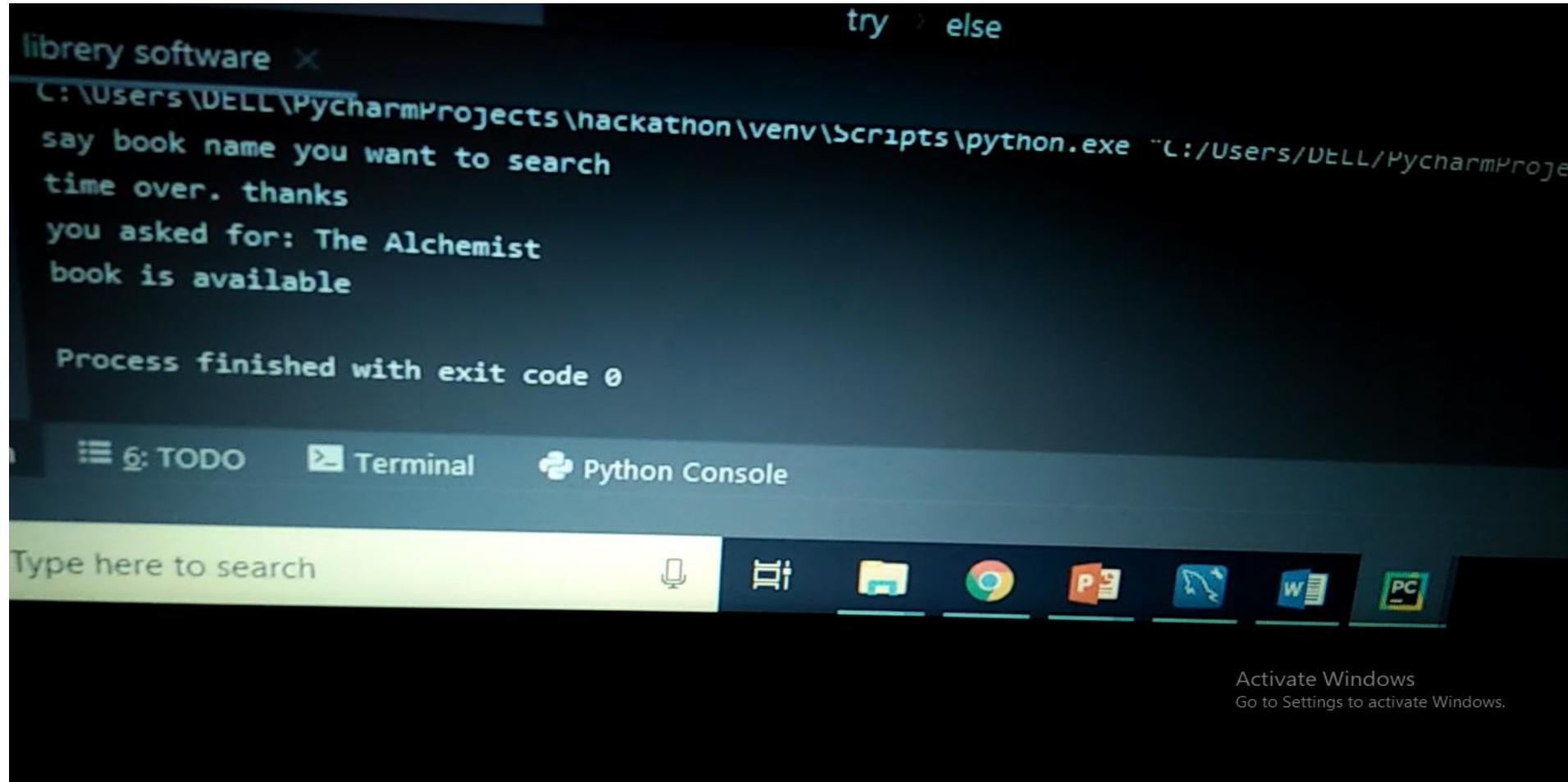
Action Output

#	Time	Action	Message	Duration / Fetch
✓ 1	12:43:58	show databases	5 row(s) returned	0.000 sec / 0.000 sec
✓ 2	12:44:02	show databases	5 row(s) returned	0.000 sec / 0.000 sec
✓ 3	12:44:07	use library	0 row(s) affected	0.015 sec
✓ 4	12:44:11	show databases	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Activate Windows Go to Settings to activate Windows.

When book is available
(data fetched from database)



```
library software x  
C:\Users\DELL\PycharmProjects\nackathon\venv\Scripts\python.exe "C:/Users/DELL/PycharmProje  
say book name you want to search  
time over. thanks  
you asked for: The Alchemist  
book is available  
  
Process finished with exit code 0
```

The screenshot shows a PyCharm IDE interface. The top bar includes tabs for '6: TODO', 'Terminal', and 'Python Console'. The 'Terminal' tab is active, displaying the output of a Python script. The script's output indicates that a book named 'The Alchemist' is available. The Windows taskbar is visible at the bottom, featuring a search bar and several application icons. An 'Activate Windows' watermark is present in the bottom right corner.

When book is available (finding genre online)

The screenshot shows a Google search for "the alchemist genre". The search bar contains the text "the alchemist genre". Below the search bar, the results are categorized under "The Alchemist > Genres". The genres listed are: Novel, Fantasy, Fantasy Fiction, Drama, Quest, and Adventure fiction.

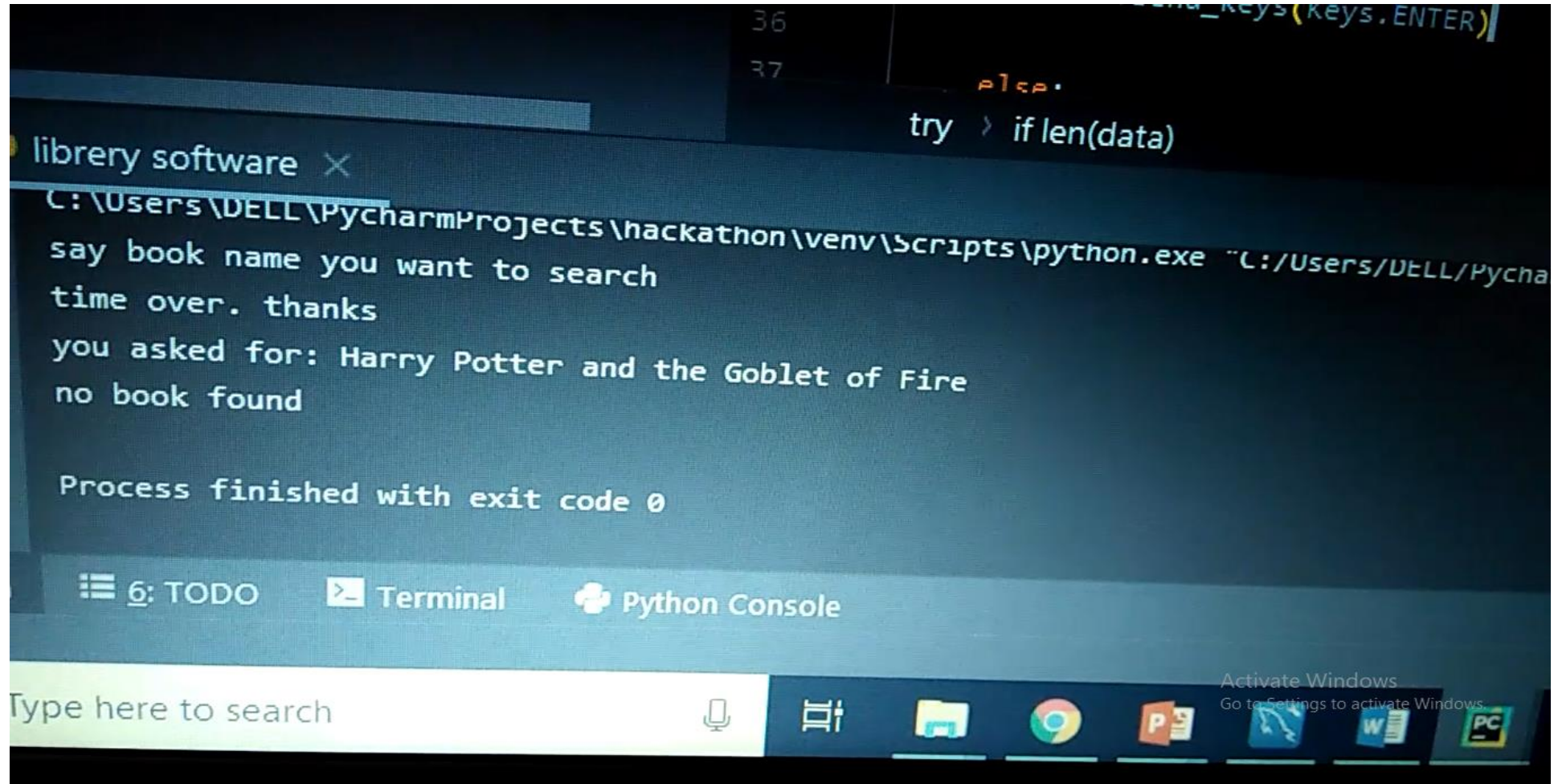
Below the genres, there is a snippet from Wikipedia for "The Alchemist (novel)". The snippet includes the following information:

- en.wikipedia.org > wiki > The_Alchemist_(novel)
- The Alchemist (novel) - Wikipedia**
- An allegorical novel, **The Alchemist** follows a young Andalusian shepherd in his journey to the pyramids of Egypt, after having a recurring dream of finding a treasure there.
- Genre:** Quest, adventure, fantasy **Publisher:** HarperTorch (English translation)
- Published in English:** 1993 **Publication date:** 1988
- Paulo Coelho · Alchemist (disambiguation) Simoom · Melchizedek

On the right side of the search results, there is a "Shop on Google" section. It features a book cover for "The Alchemist" by Paulo Coelho, priced at ₹102.50, available on Amazon.

At the bottom of the screen, there is a Windows taskbar showing the time as 37:10, the date as CRLF UTF-8, and the system language as Python 3.6 (hackathon). The taskbar also shows the Windows logo and several application icons.

When book is not available
(data fetched from database)



The screenshot shows a PyCharm IDE interface. The top pane displays Python code with line numbers 36 and 37. Line 36 contains `send_keys(keys.ENTER)` and line 37 contains `else:`. The bottom pane is a terminal window titled "library software" with a close button. The terminal output shows the command `C:\Users\DELL\PycharmProjects\hackathon\venv\Scripts\python.exe "C:/Users/DELL/Pycha` and the following text: `say book name you want to search`, `time over. thanks`, `you asked for: Harry Potter and the Goblet of Fire`, and `no book found`. At the bottom of the terminal, it says `Process finished with exit code 0`. The PyCharm interface includes tabs for "6: TODO", "Terminal", and "Python Console". The Windows taskbar at the bottom shows the search bar with the text "Type here to search" and several application icons: File Explorer, Google Chrome, Microsoft PowerPoint, a blue icon, Microsoft Word, and a PC icon. A watermark "Activate Windows" is visible in the bottom right corner.

```
36 send_keys(keys.ENTER)
37 else:
    try > if len(data)
```

library software X

C:\Users\DELL\PycharmProjects\hackathon\venv\Scripts\python.exe "C:/Users/DELL/Pycha

say book name you want to search

time over. thanks

you asked for: Harry Potter and the Goblet of Fire

no book found

Process finished with exit code 0

6: TODO Terminal Python Console

Type here to search

Activate Windows
Go to Settings to activate Windows.

Link for demo

https://drive.google.com/drive/folders/1no_QruWos1p4F2UYeKhqamZixuoilY88?usp=sharing

Thank you