**Lab 7 & 8 -- Questions & Instructions (Oct 7, 2021 & Oct 13, 2021)**

You are required to attempt all questions…

Answers need to be succinct and in your own words…

Verbosity is undesirable…

Total points = 15 \* 5 = 75

Your submission will be a singular pdf file <Naming convention Roll\_No.\_FirstName\_Lab6.pdf> - containing assumptions, observations, theoretical answers/expectations/predictions, and code with outputs and observations

Deadline for submission: Oct 16, 2021.

1. Create a database comprising the following partial tables of an ordered library catalogue:

Book\_Details:

| **Author\_ID** | **Book\_ID** | **Book** |
| --- | --- | --- |
| Da\_001 | Da001\_Sel | Self Comes to Mind |
| Mi\_009 | Mi009\_Emo | Emotion Machine |
| Mi\_009 | Mi009\_Soc | Society of Mind |
| Ra\_001 | Ra001\_Pha | Phantoms in the Brain |
| Ro\_015 | Ro015\_Fan | Fantastic Beasts and Where to Find Them |
| Ro\_015 | Ro015\_Gob | Goblet of Fire\_Harry Potter |
| Ro\_015 | Ro015\_Phi | Philosopher’s Stone\_Harry Potter |
| Ro\_015 | Ro015\_Pri | Prisoner of Azkaban\_Harry Potter |
| Sa\_001 | Sa001\_Voy | Voyage of the Turtle |
| Sa\_001 | Sa001\_Wha | What Animals Think |
| To\_015 | To015\_Fel | Fellowship of the Rings\_Lord of the Rings |
| Wo\_015 | Wo015\_Wod | Wodehouse at the Wicket |

Author\_Details:

| **Author\_ID** | **Author\_Name** |
| --- | --- |
| Da\_001 | Damasio |
| Mi\_009 | Minsky |
| Ra\_001 | Ramachandran |
| Ro\_015 | Rowling |
| Ru\_021 | Russel |
| Sa\_001 | Safina |
| Ta\_001 | Tagore |
| To\_015 | Tolkien |
| Wo\_015 | Wodehouse |

Book\_Purchase\_Details:

| **Book\_ID** | **Purchase\_Dt** | **Copies** | **Price** | **Purchase\_Price** | **Book\_Value** |
| --- | --- | --- | --- | --- | --- |
| Da001\_Sel | Sep 1, 2021 | 1 | $50 |  |  |
| Da001\_Sel | Sep 7, 2021 | 5 | $50 |  |  |
| Mi009\_Emo | Sep 2, 2021 | 2 | $50 |  |  |
| Mi009\_Soc | Sep 1, 2021 | 2 | $50 |  |  |
| Ra001\_Pha | Sep 2, 2021 | 2 | $50 |  |  |
| Ro015\_Fan | Sep 1, 2021 | 3 | $50 |  |  |
| Ro015\_Fan | Sep 9, 2021 | 12 | $35 |  |  |
| Ro015\_Gob | Sep 1, 2021 | 3 | $50 |  |  |
| Ro015\_Phi | Sep 1, 2021 | 3 | $50 |  |  |
| Ro015\_Phi | Sep 10, 2021 | 20 | $75 |  |  |
| Ro015\_Pri | Sep 1, 2021 | 3 | $50 |  |  |
| Sa001\_Voy | Sep 2, 2021 | 2 | $50 |  |  |
| Sa001\_Wha | Sep 2, 2021 | 2 | $50 |  |  |
| To015\_Fel | Sep 1, 2021 | 3 | $50 |  |  |
| To015\_Fel | Sep 12, 2021 | 9 | $55 |  |  |
| Wo015\_Wod | Sep 5, 2021 | 1 | $50 |  |  |

1. Create a view comprising Author\_name, Book\_Name and Copies; Group by Book\_Name
2. Test the difference in retrieval time of the data in (a) post execution of the SQL and that from the created view. Note any observations made.
3. Can you insert entries into the above view?
4. Can you delete entries from the above view?
5. What happens to the view if you insert or delete tuples from the main database?
6. Can you update the view?
7. Create a trigger to calculate the Purchase\_Price of the books on the date of purchase
8. Is the above an example of a DDL or a DML trigger
9. Can we create triggers on views? If yes, frame an example using the given scenario, if not justify your answer
10. What are DDL triggers?
11. Can you think of examples of DDL triggers for the given scenario?
12. Create a view/trigger comprising Author\_name, Book\_Name, Book\_Value, where Book\_Value derives from the Purchase\_Price as on Purchase\_Dt and Copies purchased
13. Calculate the total money the library has spent for purchasing all books using triggers. What type of trigger are you going to use for this ?
14. Calculate the total money the library has spent for purchasing each book using triggers. What type of trigger are you going to use for this ?
15. Can you use both ‘After’ and ‘Before’ triggers together? Show with the help of an example derived from the given scenario.

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