NSQ - 1st assignment report

Note: The queries can be tested as we have the database hosted:

Server name: nsq1.postgres.database.azure.com
Username: postgresAdmin
Password: Nsqlnsql1
Port: 5432

- *What were the decisions taken in the modelling?*
- *Why were these decisions taken?*
- *What were the consequences of these decisions?*

The initial modelling was based on the way Amazon displays their sub/categories, book genres, characters and other information necessary to complete the assignment. Categories can have multiple sub categories or none at all. Books usually have at least one genre or character but can have multiple. Certain characters can be found only in specific subcategories.

All of this had to be considered when the data modelling took place. This led us to implementing multiple lookup tables to be able to link this information to the individual book with many to many relationships. The consequence and possible downside of this choice is that multiple joins are required while doing queries. Additionally, as a consequence of having lookup tables based on bookToOrderLookup is that we need to have multiple entries in the lookup table as long as there were more than one kind of book sold within the same order.

We also used a recursive table for the categories since one “main” category can, but doesn’t have to, have multiple “sub” and “final" categories linked to it. The consequence of this decision is that there is no strict rule about the relation between categories when it comes to their hierarchy. What is more, this solution brings some flexibility so that a new layer of categories can be added by simply adding a new row instead of creating a new table.

When modelling orders, the quantity of each book was added into the lookup table that is connecting books and orders to keep track of how many copies of each individual title have been sold in each order and to keep track of how many books are still left in stock, a trigger was added so that every time a customer buys some books, it fires off and subtracts the quantity in the book quantity row for each book in an order.

- *What were the difficult and easy parts of the exercise?*

At first glance, the most complex part of the assignment was the initial modelling however as soon as we got started with it we realised it is in fact fairly straight forward.

Because of the lookup tables it was easy to come up with the idea of what to use in order to answer each of the query questions. On the other hand, this forced us to often do multiple joins which was the difficult part.