**Database Type**

**Context and Problem Statement**

To store all the necessary data including information on media, branches, stock etc...

**Decision Drivers**

* System needs to be scalable as it will have at least 11 million users at launch with a 10% annual increase.
* Data needs to be easily linked to other aspects of the system. For example books need to be linked to branches, media types need to be linked to media etc...
* Data needs to interact well with data transfer objects
* Data needs to be easily translatable to objects via entity framework

**Considered Options**

* Relational Database
* Non relational database

**Decision Outcome**

Chosen option: "Relational Database", because it is the only option that works well with entity framework. Data is predictable as we know what data is being received.

**Consequences**

* Good, because of connecting objects.
* Good, because It prevents duplicate data.
* Good, because It allows the use of normalisation.
* Bad, because it is not very scalable, the more tables and records the slower the database will be.
* Bad, because it is difficult to change an object as you will need to change the entire table.

**Confirmation**

The ERD’s created for the use cases will show the type of database being used for the system.

**Pros and Cons of the Options**

**Relational Database**

{example | description | pointer to more information | …}

* Good, because it allows us to connect objects to each other.
* Good, because it prevents duplicate data..
* Good, because it allows the use of normalisation.
* Neutral, because microservices is a more modern standard that is increasingly being adapted.
* Bad, because it is not very scalable, the more tables and records the slower the database will be.
* Bad, because it is difficult to change an object as you will need to change the entire table.

**Non Relational Database**

{example | description | pointer to more information | …}

* Good, because it can store a wide range of data.
* Good, because it is easy to store large data sets.
* Neutral, because data can be stored in different ways.
* Bad, because data is not structured.
* Bad, because it is difficult to change an object as you will need to change the entire table.

**More Information**

{You might want to provide additional evidence/confidence for the decision outcome here and/or document the team agreement on the decision and/or define when/how this decision should be realised and if/when it should be re-visited. Links to other decisions and resources might appear here as well.}