ST. XAVIER’S COLLEGE

**(Affiliated to Tribhuvan University)**

**Maitighar, Kathmandu**

****

**Database Management System**

**Lab Assignment #1**

**SUBMITTED BY:**

**Siddhant Rimal**

**013BSCCSIT039**

**SUBMITTED TO**

|  |  |
| --- | --- |
| **Mr. Sanjay Kr. Yadav**  **( Lecturer )** |  |
| **Department of Computer Science** | |

Submission Date: August 9th 2015

1. **Create an Access database to define one-to-one, one-to-many and many-to-many relationship between entities.**

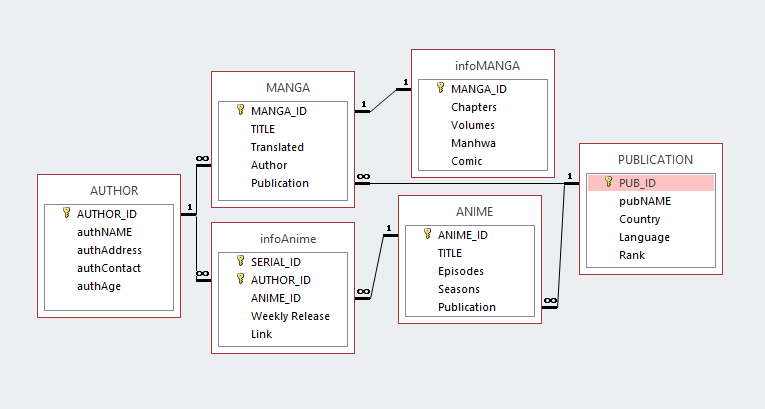


Fig. 1.1: Relationship between various entities in a database about Anime and Manga

The information provided about the relation between different entities of a database about Anime and Manga records shows the use of various types of relationships like one-to-one, one-to-many and many-to-many. Access does not have a direct option for many-to-one threby, it is upon the user to create a database which interprets data as such.

* 1. **One-to-One (1:1) Relationship**

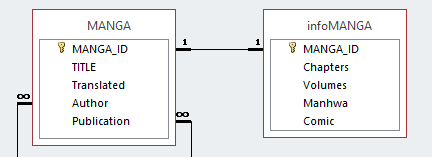


Fig.1.1.1: One-to-One Relationship

The relationship between the entities MANGA and infoMANGA is a one-to-one type of relationship. Both entities share a common primary key as an attribute with which they’re bound in this relationship. The one-to-one relationship ensures that both entities have no more than one matching attribute in their relationship. In practical terms, one-to-one relationships allow additional data something to be stored in a separate entity so that database can be easily used.

* 1. **One-to-Many(1:M) Relationship**

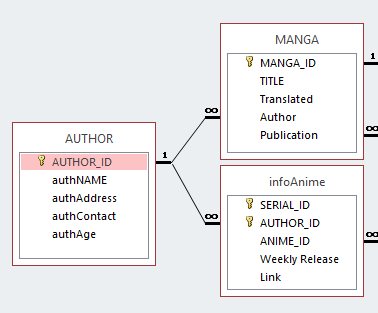


Fig.1.1.2: One to Many Relationship between Author and their contributions as Anime makers and Manga Artists.

An Author first creates a manga, then serializes it as an anime. Thereby, Author is related to both Manga and Anime. The entity AUTHOR has the attribute AUTHOR\_ID linked with similar related attribute in other entities.

Many-to-one relationship: By default, Access does not have any many-to-one relationship option available. It is upon the user to interpret the one-to-many relationship amongst entity attributes to interpret as such. [1]

* 1. **Many-to-Many(M:N) Relationship**

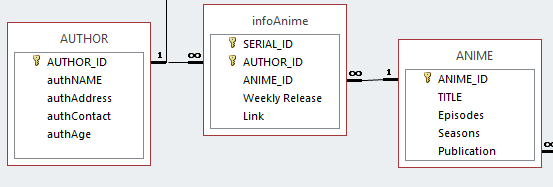


Fig.1.1.3: Many-to-many relationship between Authors and Anime

Many Authors can work on a single anime. But it is also possible that one author can create several anime series. The relationship can be interpreted as ‘Many authors can create many anime series’. It is certainly possible because one author will certainly make at least one anime series.

1. **DATA**

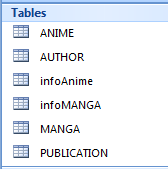


Fig.1.2: Tables involved in the database

The tables involved in this database were ANIME, AUTHOR, infoAnime, infoMANGA, MANGA and PUBLICATION. The tables hold respective relevant data to organize the values in the database. The information present in the tables were made available to each other with the help of relationship as shown in fig.1.1.

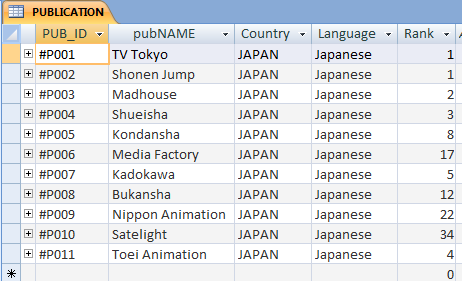


Fig.1.2.6: Data in PUBLICATION table

The PUBLICATION table holds all the information about the publication house of the respective Anime or Manga. All data are manually inserted by the user here and data from this table have some or the other form of relationship with this table.

1. **QUERY**

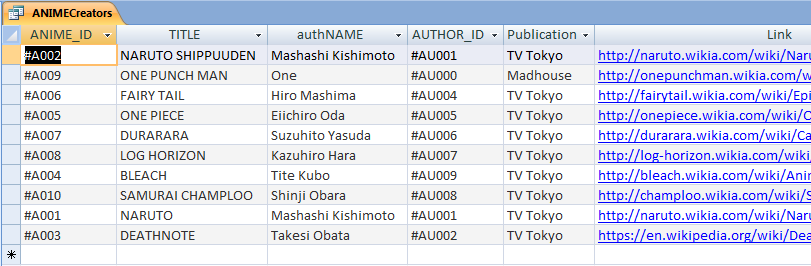
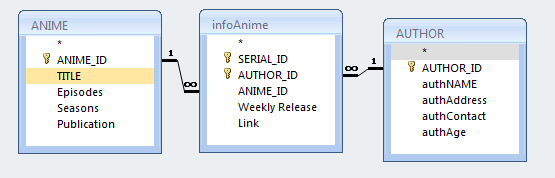
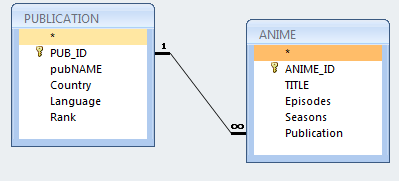
****

Fig.1.3.1:AnimeCreators Query

This query takes many to many data from all the anime and their various authors



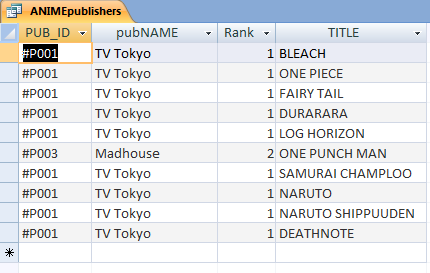
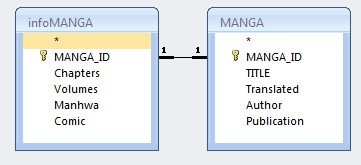


Fig.1.3.2:ANIMEpublishers Query

This query shows result about all the publications and various anime associated with it.



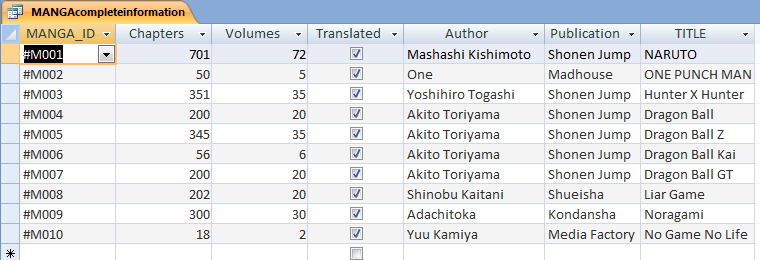
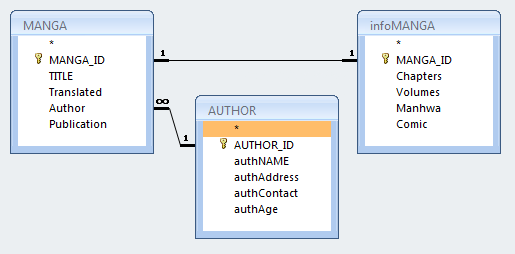


Fig.1.3.3:MANGAcompleteinformation Query

This query provides complete and comprehensive information about manga by availing one to one relation between two tables.



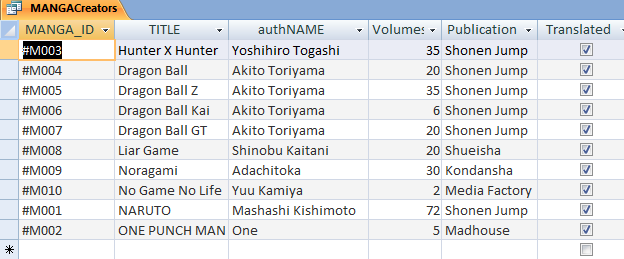


Fig.1.3.4: MANGACreators Query

This query associates complete information about various manga with respective authors using the many to one relationship as basis.

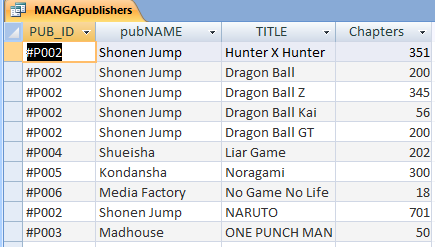
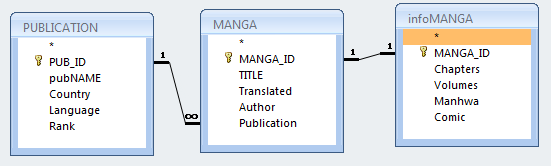


Fig.1.3.5: MANGApublishers Query

This query associates publishers with their respective mangas using one to many type of relationship.

1. **REPORT**

****

Fig.1.4.1: Report on Anime Authors and their associated publications



Fig.1.4.2: Report on Manga Authors and their associated publications

The reports generated above provide precise and comprehensive information about Anime and Manga series with their respective publishers.

1. **CONCLUSION**

It is possible to create various relationships in Ms. Access database such that entities and their respective attributes associate with each other in different ways to make sense. Also, the use of lookup function is most helpful to reference necessary data with ease. The queries associate and modify data from table to form set of needed precise information. Finally, the report generates final and overall relevant information about any set of data in the database which is required.

1. **REFERENCE**
2. “How to define relationships between tables in an Access database”.  
   Internet. url: <https://support.microsoft.com/en-us/kb/304466> 2015 [08/08/2015]