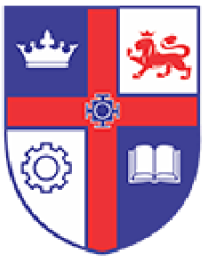
LONDON METROPOLITAN UNIVERSITY



islington college
(इस्लिङ्टन कलेज)

Module Code & Module Title

CC4057NI Introduction to Information Systems

Assessment Weightage & Type

30% Individual Coursework

Year and Semester

2019-20 Autumn

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London Met ID:

College ID: NP01NT4A190138

Assignment Due Date: 22nd November, 2019

Assignment Submission Date: 22nd November, 2019

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

Contents

List of Figures

List of Tables

1. What is an Information System? Write down your understandings. Give examples where required.

Information System is the amalgamation and coordination of its own components like Hardware, Software, Database, Telecommunication and Human Resources. It plays a vital role in storing, computing, distributing and communicating information when needed by organization. The motive of Information System is to convert raw facts and data into useful information, which can be used for decision-making and survey of the organization that might help in the advancement of the organization.

The components of information system are Hardware, Software, Database, Telecommunication and Human Resources. Hardware like keyboard, flash drives; disks etc. are physical component that helps to input data. Software is the set of instruction that tells the Hardware what to do. The operating system of software helps in the operation of software and application software executes tasks like making documents, designing webpages etc. Database is a place where raw data are stored that can be used in decision-making. Telecommunication helps in communicating the data and information in organization. It consists of computers, hubs, routers etc. Human resources are the skilled manpower of an organization that run and manage the system. All these components of Information System are interrelate to each other.

Information System bolsters up the key part of running an association. For instance, a school needs to keep record of the performances of the students, their mark sheets and their attendance etc. and report it to their parents for improvement in their performance. The only thing that comes handy in such cases is Information system as it provides easy access to the data and information and tranquility in storing data. It also helps to make smarter decisions and choices for the improvement and advancement of the organization. Similarly, Information system is important in many other organizations as it helps in making decision for the advancement of organization.

2. What are databases? What is the role of a database in an organization? Write down your understandings with suitable examples where required.

Database is the precise assortment of data in an organized way. Database provides easy access to the stored data and information. It also facilitates for storage, manipulation and restoration of data in data processing operation. The program, which facilitates its user for storage, manipulation and recovery of data, is called Database Management System (DBMS). Database is managed by a space explicit language SQL (Structured Query Language) utilized in programming and intended for overseeing information.

Every organizations and companies in this era run on databases as it helps with easy access of information and data when needed. Not only organizations and companies, database plays a vital role in our everyday life too. For instance, a clothing store keeps a record of its customers, customers' ID, products purchased, prices, quantity, department ID etc. Database allows these data to be stored quickly and these data could be reached quickly at the time of necessity. These stored data could be used in the future for decision-making process for the advancement of the store. It also helps advertising exercises for the database to gather client information in a total and definite in order to encourage the showcasing exercises for an association or organization.

Database also helps in maintaining security of the data and information of the organization. With a decent database, an association can screen the advancement of the activity well, so they can make speedy and proper strides if an issue happens. So the maintaining a proper database is a wise act for every organization for the better advancement.

3. Select an organization of your choice and design a database for it. Explain your database design:

3.1 What is the database about?

My database is about an artist (musician).

3.2 What each entity (table) represents?

Each entity table represents

- Artist, who makes an album of songs
- Album, made by an artist and has a genre
- Genre of an album that is implied in songs
- Songs of a genre
- Customers that buy songs

3.3 What each attribute (column) represents? What kind data do they store?

- Artist table contains 4 attributes and they are
  - Artist Name: It shows the name of the artist (musician) which is stored in the datatype VARCHAR(255)
  - Date of Birth: It shows the birth date of an Artist, which is stored in the datatype VARCHAR.
  - Address: It shows the place of artist's residence and it is stored in datatype VARCHAR(255)
  - Artist ID: It is a unique ID assigned to the specific artist and is stored in the datatype INT. It is also the PRIMARY KEY.

- Albums table contains 4 attributes and they are
  - Album Name: It shows the name of the album created by the artist which is stored in VARCHAR(255)

- Album ID: It shows the specific unique ID assigned to the album, which is stored in the datatype INT and it is the PRIMARY KEY
- Released date: It shows the date in which the album was released and it is stored in the datatype DATE
- Artist ID: It is the unique ID that is assigned to the artist and stored in datatype ID. Also, it is the FOREIGN KEY

- Genre table contains 3 attributes and they are
  - Name: It is the name of genre of the songs that describes what style the songs are. It is stored in datatype VARCHAR(255)
  - Album ID: It is the ID assigned to the album that might help in finding the song and stored in the datatype INT. It is also the FOREIGN KEY.
  - Genre ID: It is the ID assigned to the genre of the genre that is stored in the datatype INT. It is the PRIMARY KEY.

- Song table contains 4 attributes and they are
  - Name: It shows the name given to different songs and is stored in datatype VARCHAR(255)
  - Song ID: It shows the specific ID assigned to the songs that is stored in datatype INT. It is the PRIMARY KEY
  - Genre ID: It is the ID assigned to the genre of the album or songs that is stored in the datatype INT. It is the FOREIGN KEY
  - Length: It is the runtime of the songs that is stored INT.

- Customer table contains 3 attributes and they are
  - Name: It shows the name of customer that buys the songs. It is stored in datatype VARCHAR(255)
  - Phone: It shows the contact number of the customer
  - Song ID: It shows the specific ID assigned to the songs that is stored in datatype INT. It is the FOREIGN KEY
  - Customer ID: It is the specific ID of the customer, which is unique and stored in the datatype INT. It is a PRIMARY KEY

3.4 Which attributes (columns) are the primary keys and what are the reasons for selecting them?

Artist ID in Artist table, Album ID in Album table, Genre ID in Genre table, Song ID in song table and Customer ID in Customer table are all primary keys because they unique value and they all differ from each other and they can't null value. For instance, Artist ID helps us to identify a particular artist among many other artist as the Artist ID is a unique value that only one artist can have.

3.5 Which attributes (columns) are the foreign keys and how do they form the relationships between the tables?

Artist ID in album table, Album ID in Genre table, Genre ID in song table and Song ID in customer table are the foreign keys because the keys helps to relate each other by linking the keys of the another table. In addition, it helps to identify a particular row of a table.

4. Present the above designed database in the form of tables with some dummy data. Also, draw an entity-relationship diagram (ERD) for the database.

Name	Address	Date of birth	Artist ID
Randy Adler	Kathmandu	1974-09-22	3245
Alex Cruz	Butwal	1975-10-05	3432
Will Taylor	Pokhara	1973-07-25	3222

Table 1: Artist

Album Name	Album ID	Released Date	Artist ID
Sacrament	P73284	2002-07-24	3245
Wrath	P34234	2000-04-13	3432
Dystopia	P46736	2003-10-10	3222

Table 2: Album

Genre Name	Album ID	Genre ID
Heavy Metal	P73284	G114
Deathcore	P34234	G082
Rock	P46736	G102

Table 3: Genre

Song Name	Length	Genre ID	Song ID
Omerta	3min40sec	G114	1723943
Descending	4min28sec	G082	1823745
Ruin	5min28sec	G102	1435267

Table 4: Song

Name	Customer ID	Phone	Song ID
James Harden	198232	9876543210	1723943
Allen Iverson	236478	9123456780	1823745
Kobe Bryant	234345	9543216708	1435267

Table 5: Customer

Here, the columns highlighted in yellow are primary keys and the columns highlighted in green are foreign keys.

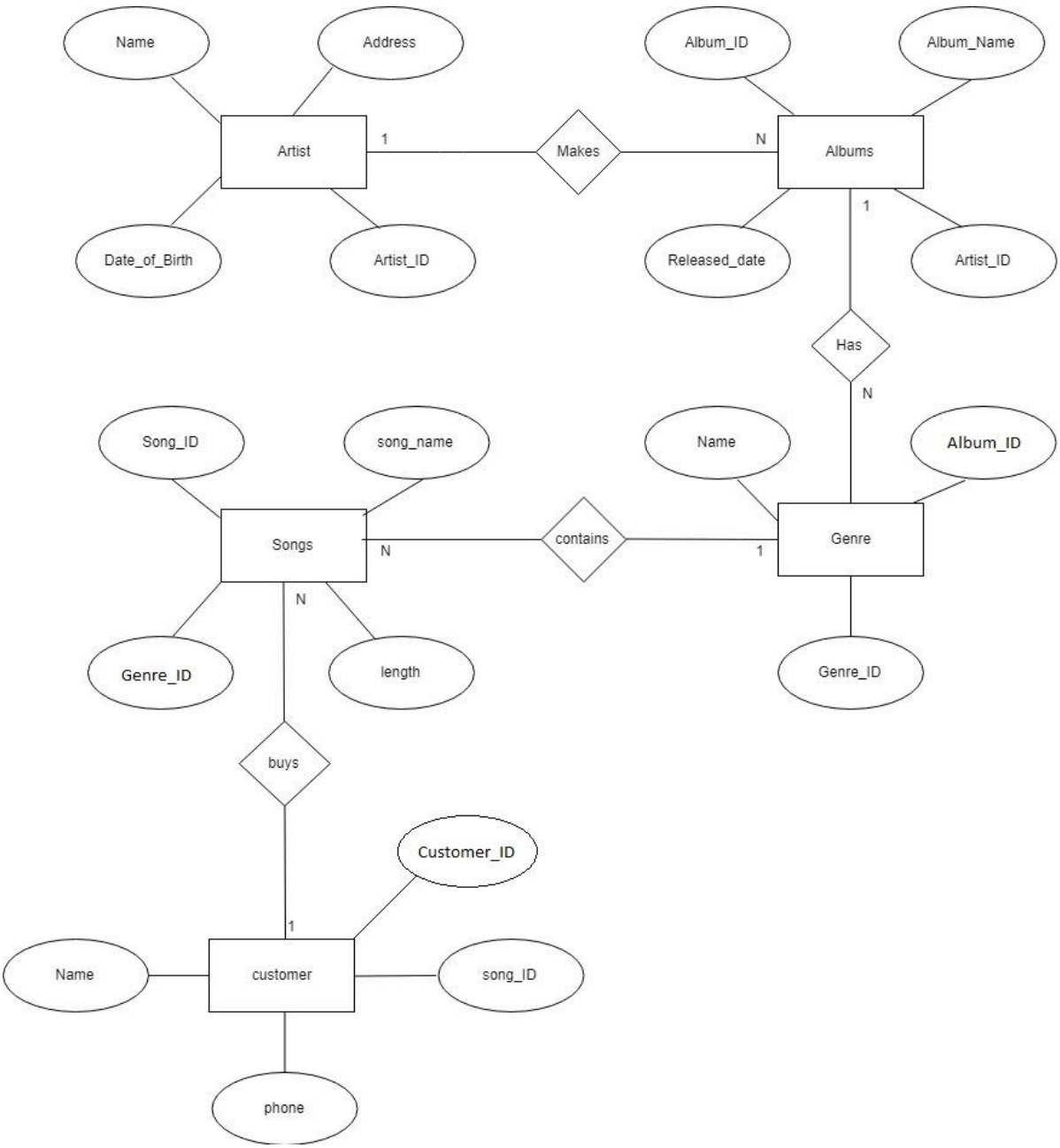

Figure 1: ER diagram of an artist

5. Write a personal reflection (max. 800 words) of the learning process up to the moment. You may wish to summarize your thoughts on the following points:

- your preparation for the subject before you started the module
- your expectations from the module when you started it
- looking back, were you able to meet those expectations
- how are you coping with the requirements, are you managing it
- What are your current difficulties; if any, what do you think you need to do to get the most out of this module

To begin with, I completed my high school with science as a major subject. Therefore, this module is completely new to me since I did not have any information about this module because I was never taught about this before. In addition, I was not aware about this module, as I had never heard about it before so I did not do any preparation for this module. It has been a tough challenge with this module. Had I known about this module before, I would have surely done some preparation for this module.

When I started with this module, I was completely unaware about the topic and content inside it too. Therefore, it was difficult to guess what the module would be about. However, on the very first day of my college I happened to look for it on internet and get some knowledge about it. So I assumed this topic would be about something related with database. After getting a little clue what this module would be about, expected it to help me in future with keeping track of all the data and information of the company and organization I might work in.

Since, it’s been only a while we started this module I’m not so used to this module and by the time now it’s been the way I expected it to be i.e. we’ve been learning about maintain data within a database. And I hope it goes the way I expected in upcoming days too.

In the meantime, the module has been quite easy because it is just a starting phase and we have learning basics so there has not been much problems up to the date. The module also seems quite interesting and fun. The module has been quite fascinating and the coursework too as it is my very first experience dealing with assignments and coursework. Moreover, I hope the module will not get any tougher than this.

There has been lots of challenges and obstacles dealing with this module. The major problem I had been facing with this module is that I didn't have any computer classes back in my primary school. I do not have basic knowledge about Q-basic or HTML either. So having a hard time with terms related to computer and database with not only this module but also other module was a great problem for me. Not having knowledge about information system was also a great challenge for me. Somehow, I am managing to work on the problem with the help of online courses and website. And I' looking forward for honing my skill and knowledge on this module in upcoming days.

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