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Name(s):	**John Griffin**
Programme:	**Computer Applications**
Module Code:	**CA214**
Assignment Title:	**System Analysis**
Submission Date:	**9/12/2017**
Module Coordinator:	**Mr Renaat Verbruggen**

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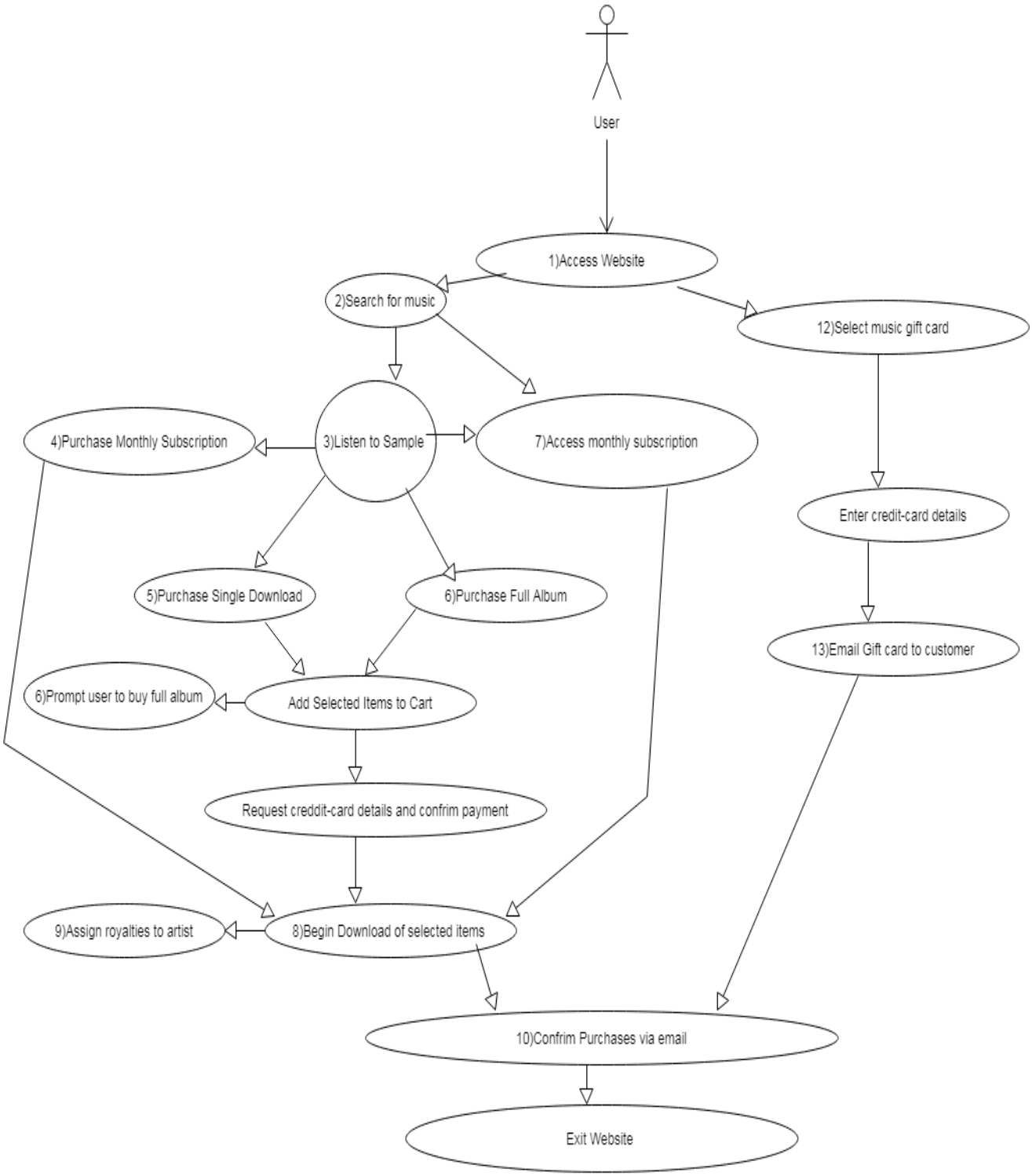
Name(s): _____*John Griffin*_____ Date: _____**9/12/2017**_____

Business Activity Model for CEOL ltd



Business Activity Model Explained

1). The first task that must be done is the user must access the website. Obviously the company and IT department must ensure the website can be assessed easily (a high ranking on the google search engine would ensure this) and the website must be easy to navigate. The homepage must promote the fact that this particular website and company is very niche and unlike anything the user can find elsewhere. This will prompt the user to progress further into the website.

2). This feature allows users to search for the music they desire. Preferably this will have a feature where the music will be split into the categories that the company specializes in - hard-to-find and classic jazz, rock, country, and folk recordings. The customer should also be able to search for specific artists, songs and albums. This will ensure a stress-free and easy to use product that will create positive feedback from both the customers and the business.

3) The user should be able to listen to the music, as outlined in the business requirements. This feature will allow the user to listen to a small sample of the song which should help them identify if it is the song they are looking for. This will help the business also by reducing the number of returns they must make.

4 + 7) After listening to the song sample, the user will be prompted to enter the details of their existing monthly subscription or purchase a new subscription. This is crucial to the business as they are expecting to make $950,000 in sales from monthly subscriptions. This option will come before the option to make a single-once off purchase of a song or album for this specific reason and also to gain a consistent and loyal consumer base.

5)The user will have the option to purchase a single download at fixed price. This is not as desirable as a monthly subscription but will count for $757,500 in sales for the business. The user will be prompted to enter his or her credit-card details and also some other basic information such as address, telephone number etc. in case of emergencies or complications with the download itself. An option to receive promotional subscriptions from the business would also be very desirable at this stage of the process and emails should be stored in a database for this particular purpose.

6) The user will have the option to purchase a full album at a fixed price. This, as outlined in the business is very desirable as they expect an increase in cross-selling from consumers who have downloaded some songs from an album and now desire the full album.

8) The download will begin by downloading the song/album from the digital music archive. This should be recorded for the business and also a very clear and easy to use page for this would be preferable as the customer has now purchased an item from the business. This means the business has an obligation to make the download process quick and easy to use as some users may not be as technically confident as others. This will increase customer satisfaction greatly. A thank you message would also be preferable.

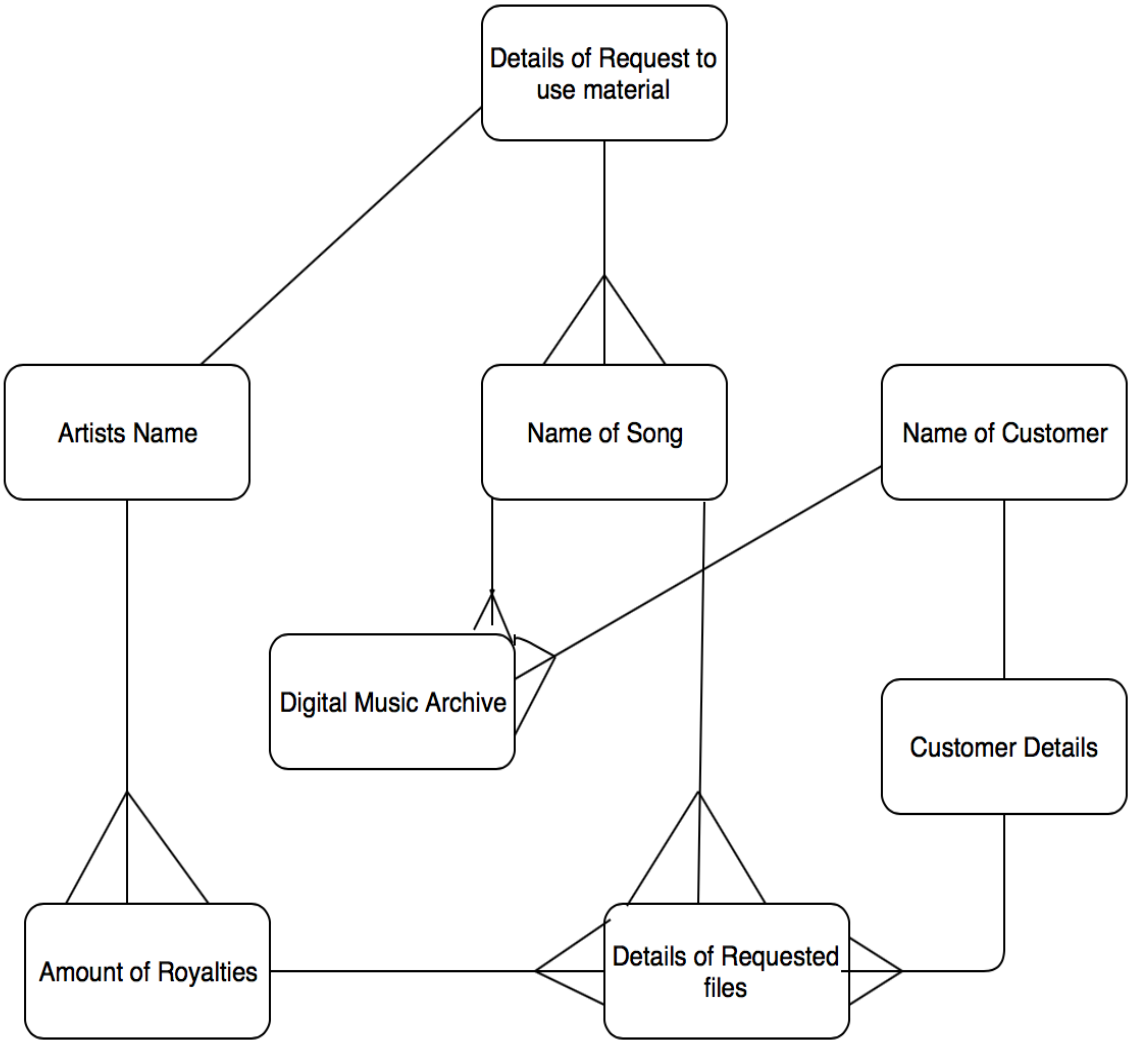
9)The business must now assign the agreed royalties to the artist. This process should be done by an automated system to avoid any time delays or complications for both the artist and the business. Ceol must make a decision whether to pay artists out Annually, monthly or on a download to download basis. After the royalties are paid out the business should gain their own cut of the purchase.

10)A confirmation email should be sent to the user to confirm they have acquired the download they intended to purchase. A questionnaire should also be sent at this stage of the process to see if a customer found any flaws with the website or process. Customers appreciate this and this increases Ceol's connection with the customer.

12) The customer should have the option of purchasing a music gift-card from Ceol. Ceol excepts these to contribute to $153,000 of sales in the business. This page should outline the terms and conditions of the gift cards very clearly and in an easy to read manner. This avoids any possible confrontation further down the line for the business.

13) Ceol should email a code for the gift voucher to the customer. The customer should also have the option to get the gift-card mailed to his or her house as the majority of these will be given as gifts.

Logical Data Model



Candidate Entities for the Logical Data Model:

- Artist Name
- Amount of Royalties
- Details of Requested Files
- Customer Details (payments, address etc.).
- Name of Customer
- Details of Request to use Material
- Name of Song
- Digital Music Archive

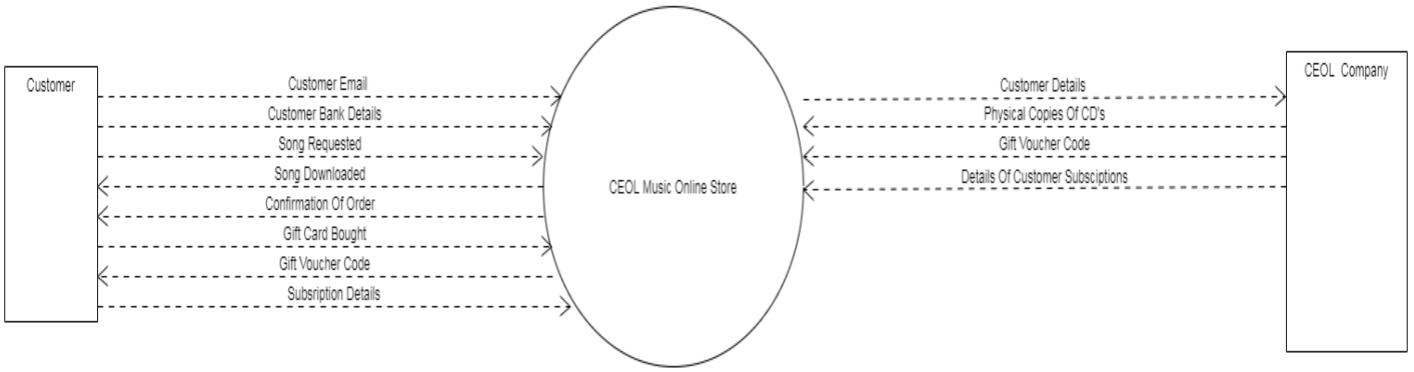
Relationships between Entities

	Digital Music Archive	**Name of Song**	**Request to use material**	**Name Customer**	**Customer Details**	**Files Requested**	**Royalties**	**Artists Name**
Artists Name			X					
Royalties								X
Files Requested		X						
Customer Details						X		
Name of Customer					X			
Request to use material		X						X
Name of Song	X							
Digital Music Archive				X				

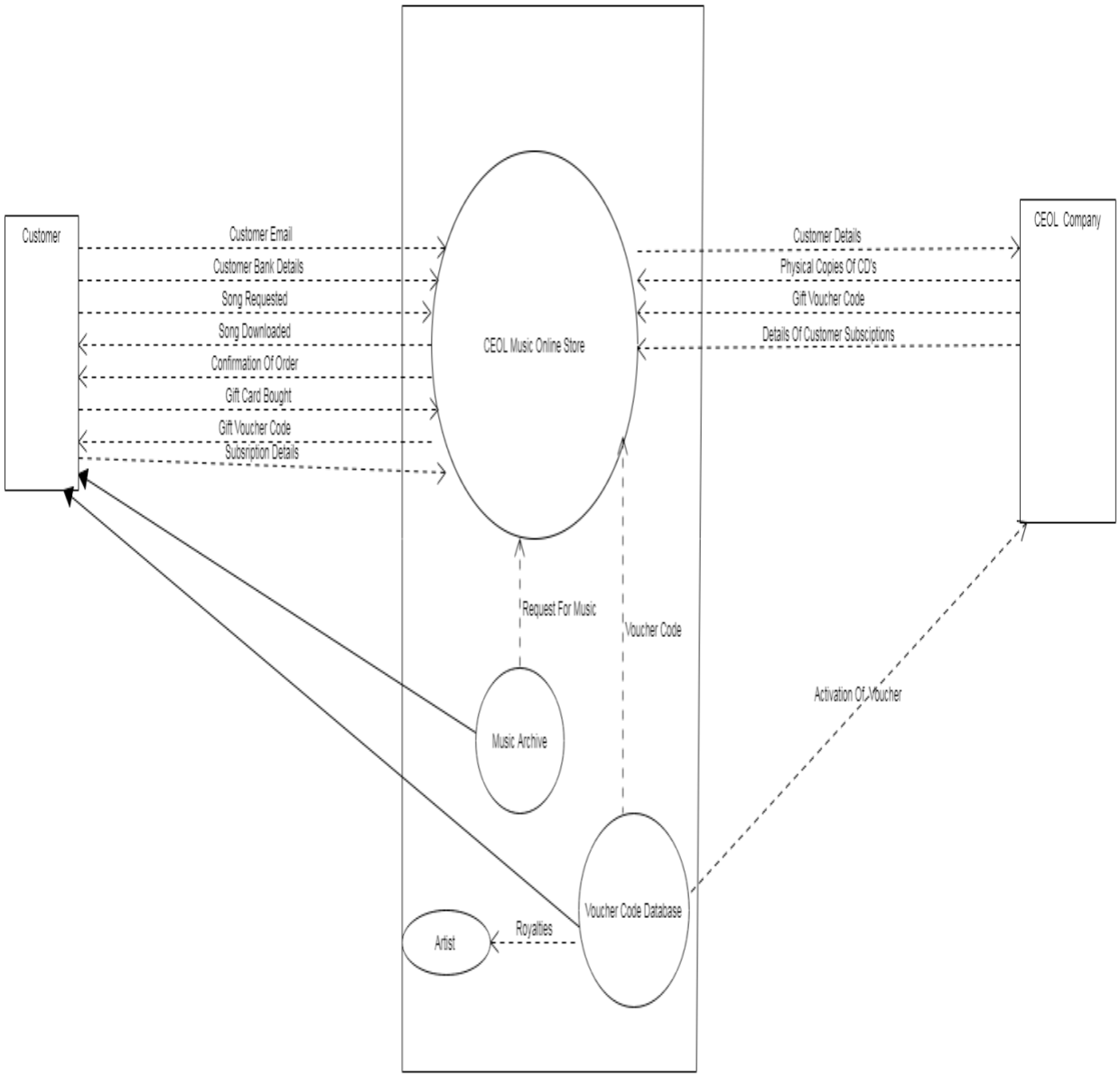
Relationships in more detail:

- Artists Name – Request to Use Material (1:1).
- Royalties – Artists Name (1:N).
- Files Requested – Name of Song (1:N).
- Customer Details - Files Requested (N:1).
- Customer Name – Customer Details (1:1).
- Request to Use Material- Name of Song (N:1).
- Name of Song – Digital Music Archive(N:1).
- Digital Music Archive – Name of Customer(1:N).

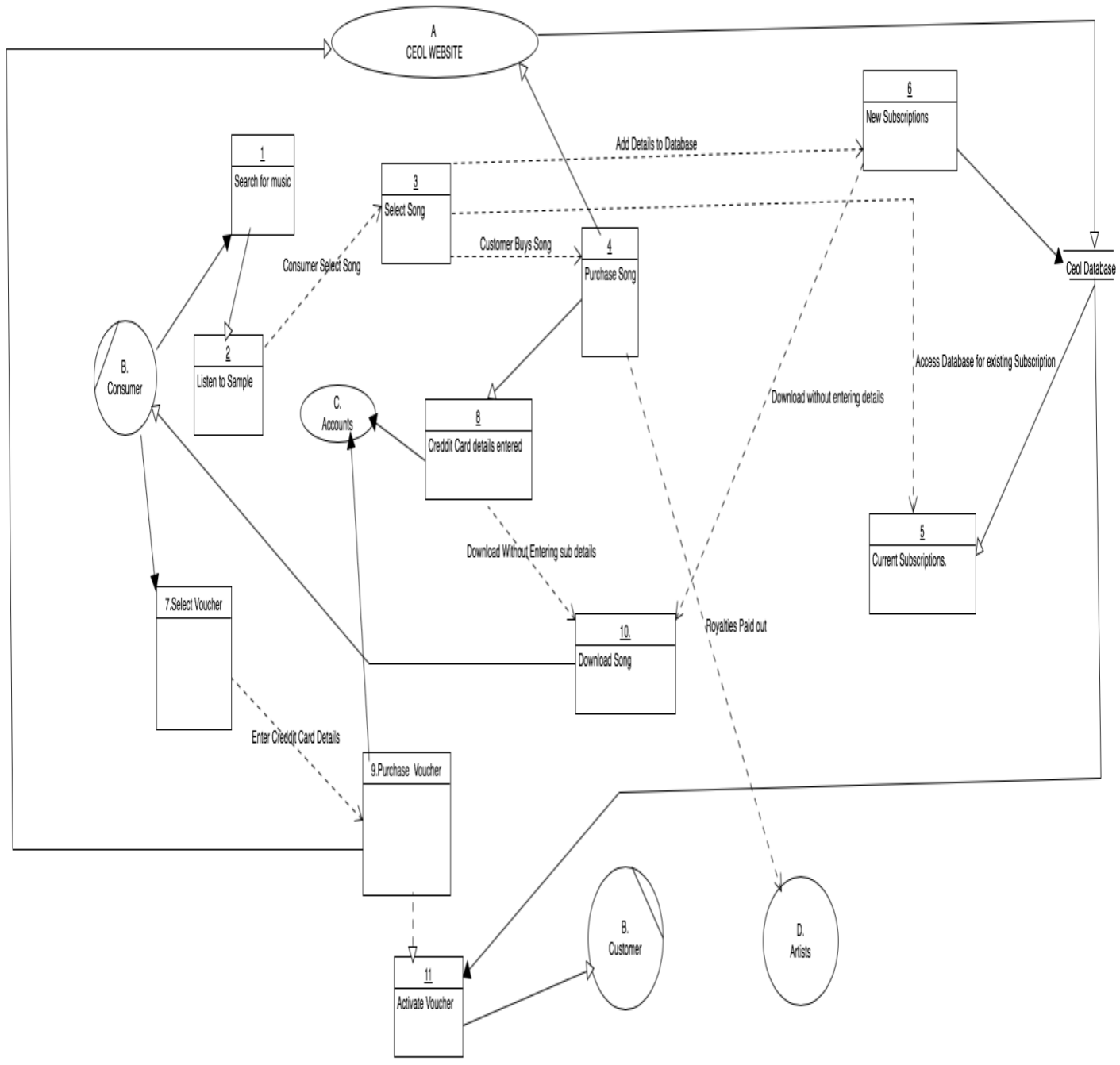
Top Level Context Diagram



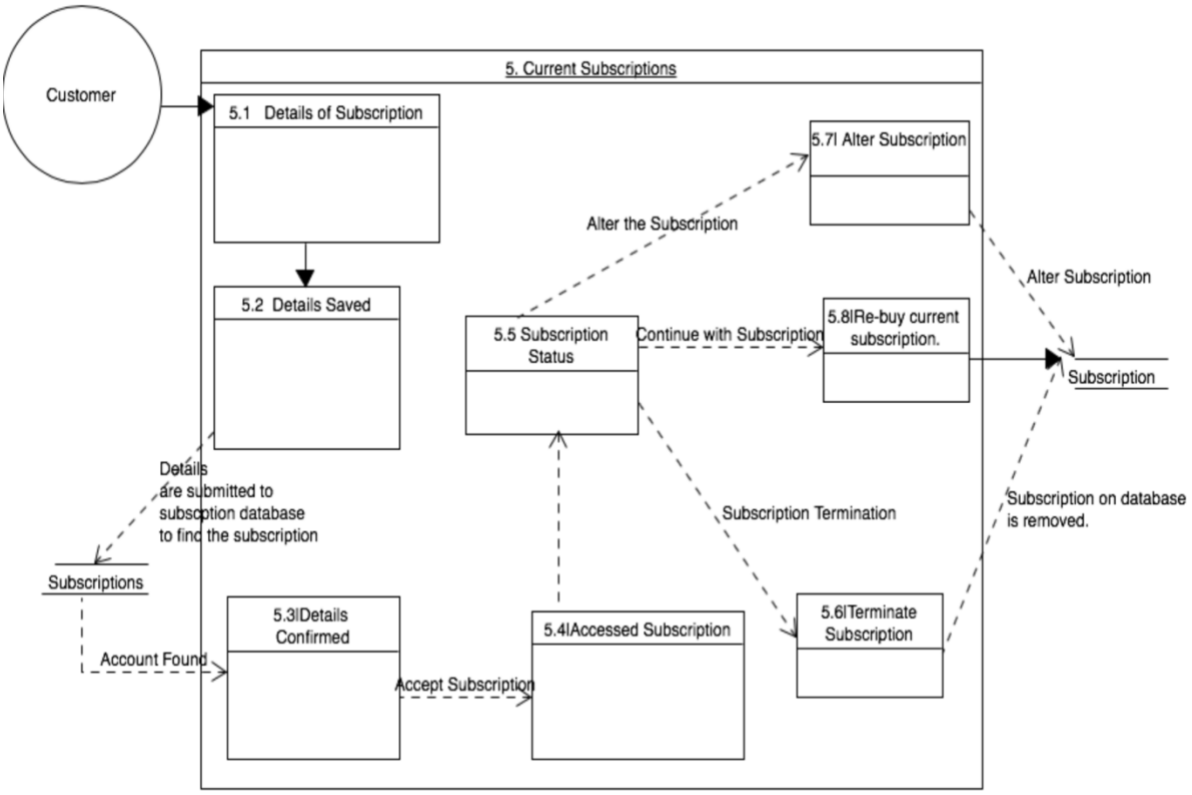
Document Flow Diagram

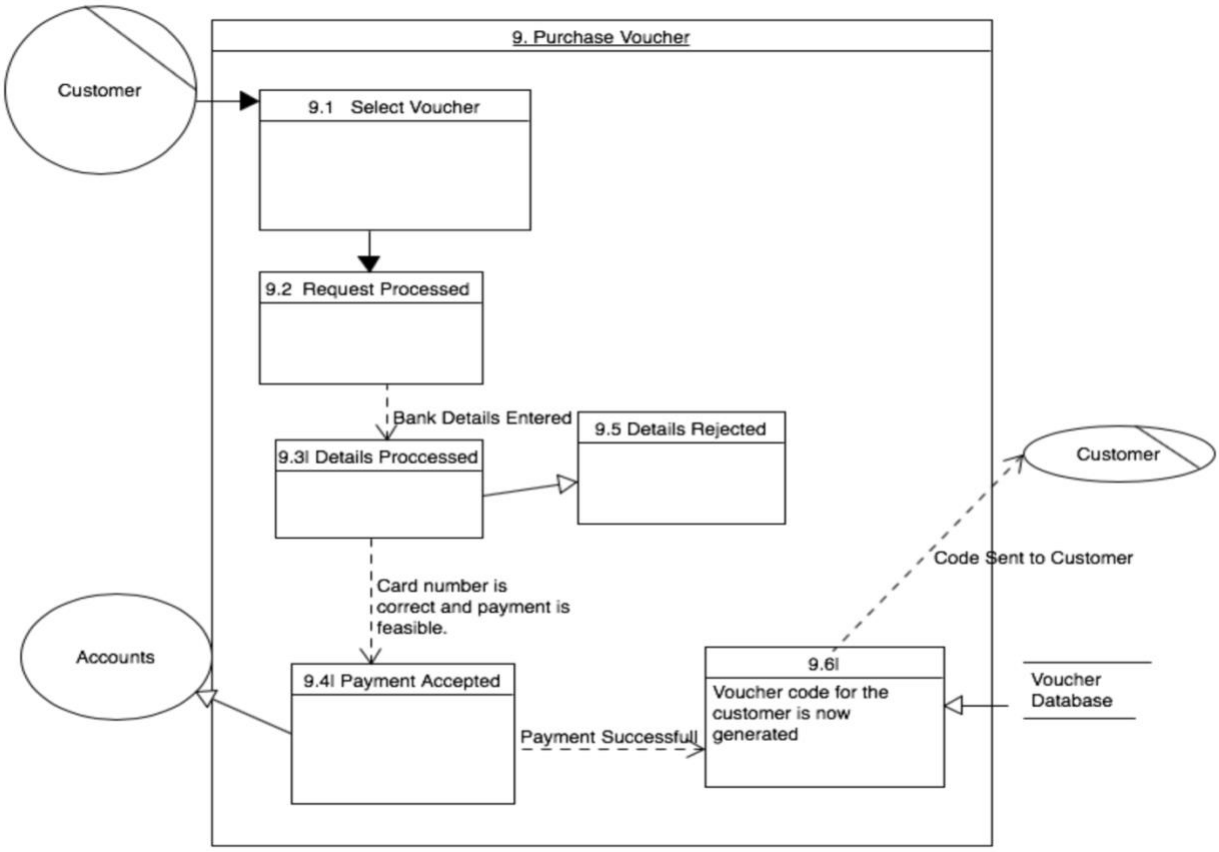


Physical Level 1 DFD for CEOL LTD

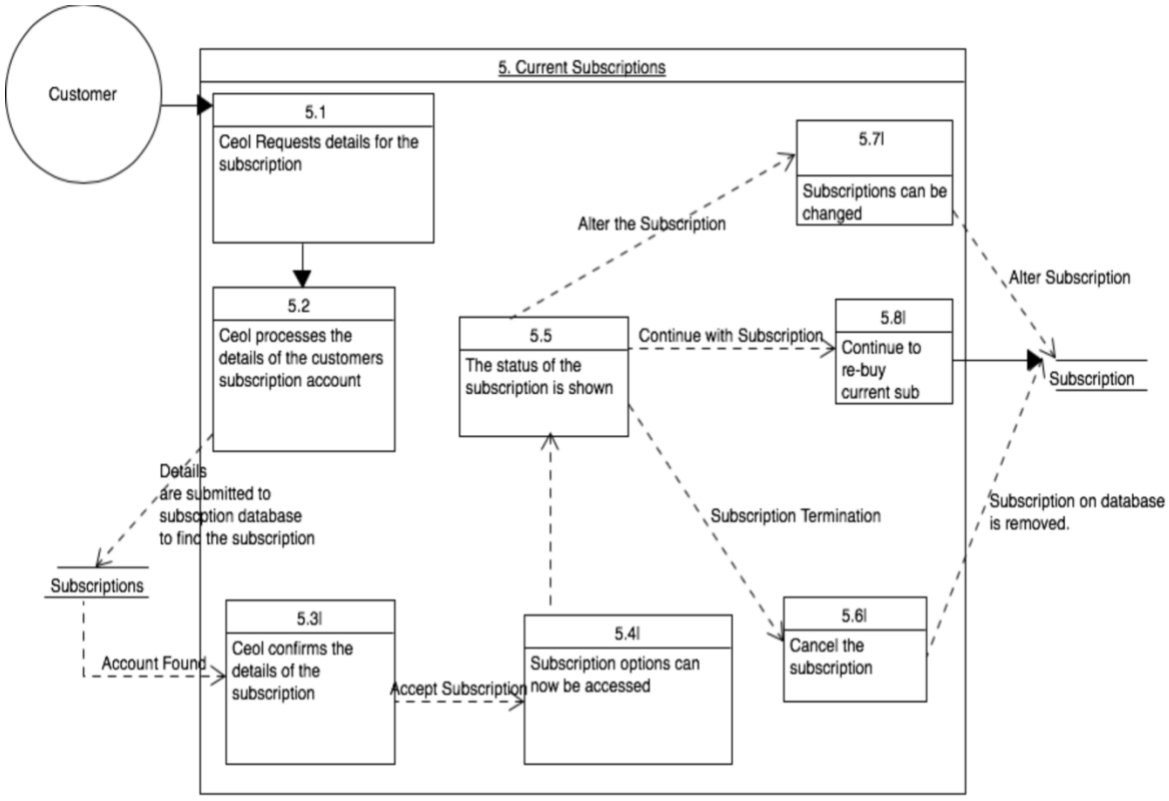


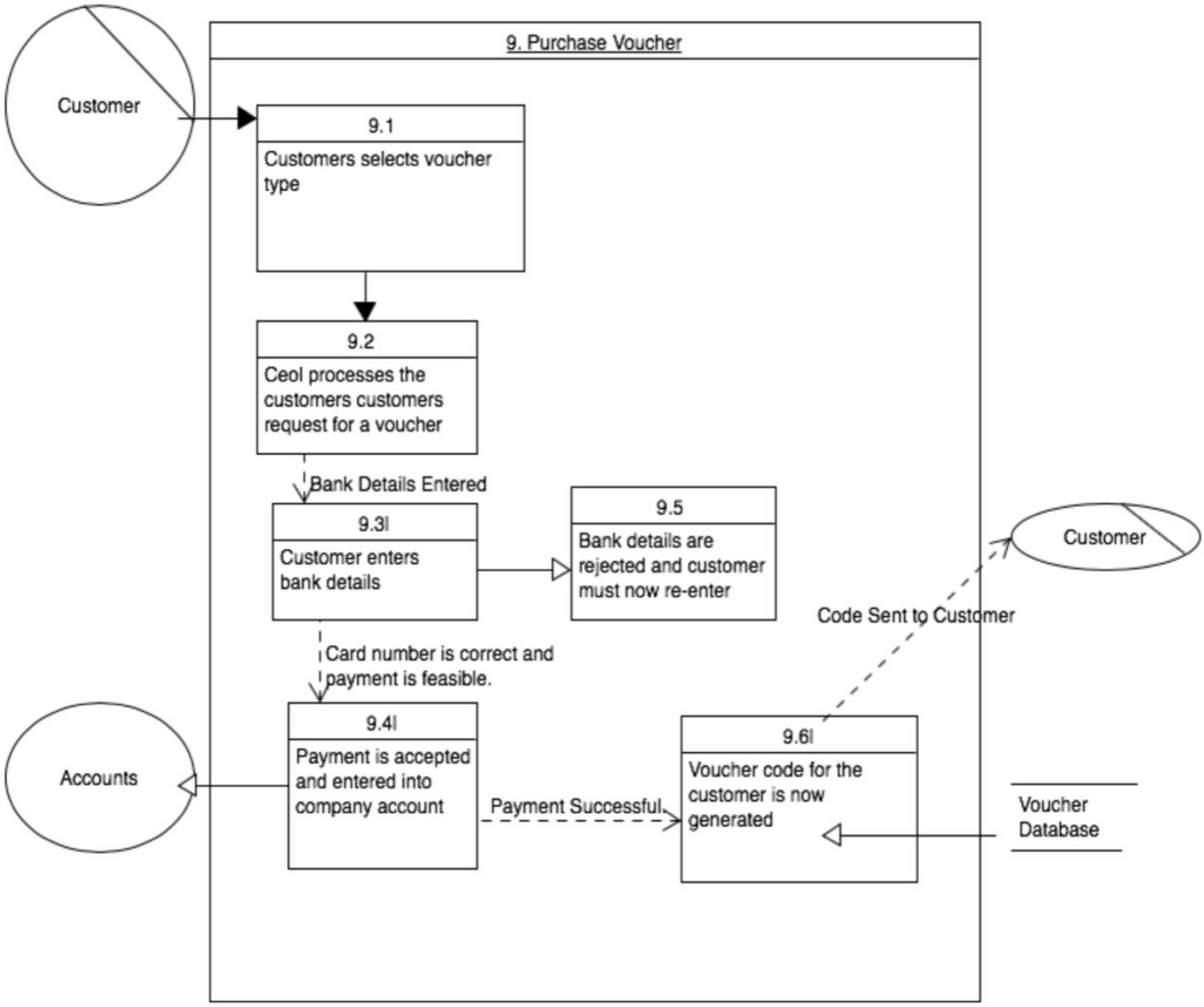
Physical Level 2 DFD's




9. Purchase Voucher
Customer
9.1 Select Voucher
9.2 Request Processed
Bank Details Entered
9.3l Details Proccessed
9.5 Details Rejected
Card number is correct and payment is feasible.
Accounts
9.4l Payment Accepted
Payment Successfull
9.6l
Voucher code for the customer is now generated
Voucher Database
Code Sent to Customer
Customer

Logical DFDs for the latter two physical level 2 DFDs.




9. Purchase Voucher
Customer
9.1
Customers selects voucher type
9.2
Ceol processes the customers customers request for a voucher
Bank Details Entered
9.3l
Customer enters bank details
9.5
Bank details are rejected and customer must now re-enter
Card number is correct and payment is feasible.
Customer
Code Sent to Customer
Accounts
9.4l
Payment is accepted and entered into company account
Payment Successful
9.6l
Voucher code for the customer is now generated
Voucher Database

Function ONE – 5.5 Subscription Status

START

L1: IF IN company.database:

PRINT "what would you like to do with your subscription?"]

IF subscription termination entered:

PRINT "Are you sure you'd like to terminate your subscription?

JMP to Subscription Terminationm

ELIF subscription alter entered:

PRINT "Are you sure you'd like to alter your subscription?"

JMP to Subscription Alter

ELSE:

PRINT "Are you sure you'd like to continue with your subscription?"

JMP to Re-buy Subscription

JMP to EXIT

ELSE:

PRINT "Access Denied"

JMP l1:

EXIT.

Function Two- 5.7 Alter Subscription

START

PRINT "What subscription would you like to change to ?"

IF "1 month Subscription" entered:

PRINT "Are you sure you'd like to alter your subscription?

Customer Subscription = 1 month subscription

CHANGE in database

EXIT

ELIF "3 month subscription" entered:

PRINT "Are you sure you'd like to alter your subscription?"

Customer Subscription = 3 month subscription

CHANGE in database

EXIT

ELSE:

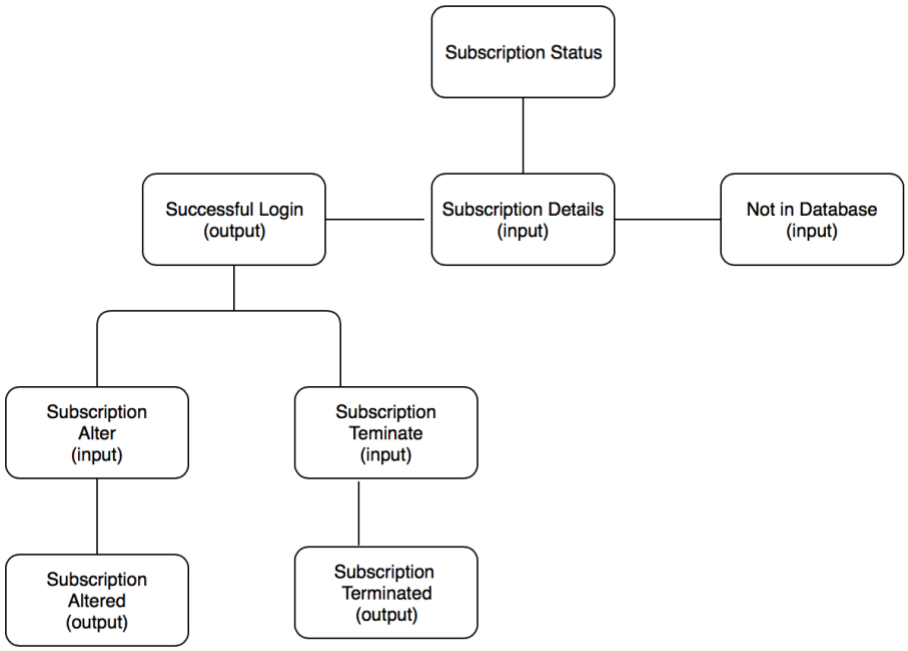
PRINT "Are you sure you'd like to alter your subscription?"

Customer Subscription = 1 year subscription

CHANGE in database

EXIT

I/O Diagram- Subscription Status



Process Description One – Current Subscriptions – Structured English

START

ENTER subscription details

IF not found EXIT

IF FOUND:

GET customer details from database

ACCESS selection page

PRINT ("What would you like to do with your subscription")

WHILE "Go back" not entered:

IF "Alter Subscription" entered:

APPLY Alter Subscription

EXIT

IF "Terminate Subscription" Entered:

APPLY Terminate Current Subscription

EXIT

IF "Re-buy Current Subscription Entrered:

APPLY

Process Description Two – Purchase Voucher– Structured English

START

SELECT voucher

PRINT "Enter bank details.

ENTER bank details.

IF Details CORRECT:

    COMPLETE payment

    GENERATE voucher code

ELSE

Print "Details are incorrect"

EXIT

External Entity Description

ID	NAME	DESCRIPTION
D	Artist	This is basically the supplier for the website. The artist is the person who supplies the music by writing it, and granting the website permission to use his/her music.

Data Flow

FROM	TO	DATA FLOW NAME	DATA CONTENT	COMMENTS
D	3.1	Select Song	Name of Song Name of Artist Price of Song Length of Song Song Genre IP location(chart benefits) Amount of copies bought	This information will also help an artist to get logistics on the type of people buying his her songs.
3.1	D	Artist	Name of Song Name of Artist Price of Song Length of Song Song Genre IP location(chart benefits) Amount of copies bought	

ENTITY DESCRIPTION

ENTITY NAME New Voucher

DESCRIPTION A document containing the information of a bought voucher and code

ATTRIIBUTE	PRIMARY KEY	FOREIGN KEY	MANDATORY/OPTIONAL
Terms and Conditions		Y	M
Details of Customer	Y		M
Price Of Voucher			M
If given as a gift			O
Purchase Date			O

MUST/MAY BE	EITHER/OR	LINK PHRASE	ONE & ONLY ONE/ ONE or MORE	ENTITY NAME
MUST		BE PLACED WITH	ONE & ONLY ONE	CUSTOMER

ENITITY VOLUMES: MAX: 500 MIN:10

USER	ACCESS
CUSTOMER	READ
OFFICE STAFF	READ,CREATE,DELETE,MODIFY

GROWTH RATE:

ARCHIVING: All new vouchers are stored in a database until used. After they are used they will be deleted.

DATA STORE
DATA STORE ID: E
DATA STORE NAME: CEOL DATABASE
The ceol database contains all the music ceol have the right to sell via online purchases . If an artist removes this right, then the music will be automatically deleted from the data store.Customers who own a subscription can access these files anytime they want via the CEOL website. Music can be added to it anytime if CEOL requests the right to use the music .