

Database for an E- commerce Website

INTRODUCTION

A database is a very efficient tool to manage and store information. I have created a database using the txt (text) file of CD orders. When the information is imported, I examined the table by part it into three unique tables which are Customer Table, Order Table, and Product Table.

The customer table contains the following fields.

- Customer ID
- Title
- First Name
- Last Name
- Address Line 1
- Town
- Country
- Post Code
- Card Type
- Card Number
- Expiry Date

The primary key of this table is Customer ID.

The Order table contains the following fields

- Order ID
- Order Date
- CD No
- CD Title
- Artist
- Customer ID
- CD Number

The primary key of this table is Order ID.

The product table Contains the following fields

- CD Number

- CD Title
- Artist
- Order Number

The primary of this table is CD Number.

IMPLEMENTATION

The implementation of the whole product was completed on the Microsoft Access 2016. It has the adaptability and the ease of use that I required to make the database. It supports the concepts of the relational database and Design view querying which was needed for trend analyzing.

Below Screenshots shows the tables in the design preview.

CUSTOMER TABLE

The below-captured screenshot shows the customer table in design view. The primary key of this table is Customer ID.

Field Name	Data Type
Customer ID	Short Text
Title	Short Text
First Name	Short Text
Last Name	Short Text
AddressLine 1	Short Text
Town	Short Text
County	Short Text
PostCode	Short Text
CardType	Short Text
CardNo	Short Text
ExpiryData	Date/Time

ORDER TABLE

The below captured screenshot shows the Order Table in design view. Primary key of this table is customer ID.

VALIDATIONS

CUSTOMER TABLE

Customer Table		
	Field Name	Data Type
🔑	Customer ID	Short Text
	Title	Short Text
	First Name	Short Text
	Last Name	Short Text
	AddressLine 1	Short Text
	Town	Short Text
	County	Short Text
	PostCode	Short Text
	CardType	Short Text
	CardNo	Short Text
	ExpiryData	Date/Time

The Customer ID I'm hoping to use has limited to 5 characters.

General		Lookup
Field Size	5	
Format		
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	Yes	
Allow Zero Length	Yes	
Indexed	Yes (No Duplicates)	
Unicode Compression	Yes	
IME Mode	No Control	
IME Sentence Mode	None	
Text Align	General	

Field Name	Data Type
Customer ID	Short Text
Title	Short Text
First Name	Short Text
Last Name	Short Text
AddressLine 1	Short Text
Town	Short Text
County	Short Text
PostCode	Short Text
CardType	Short Text
CardNo	Short Text
ExpiryData	Date/Time

The field title must be "Mr.", "Mrs.", "Miss" or "Ms.", is something besides that is composed in a customer message expressing 'Please enter either Mr., Mrs., Miss or Ms' will appear.

General	Lookup
Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	"Mr" Or "Mrs" Or "Miss" Or "Ms"
Validation Text	Please enter either Mr, Mrs, Miss or Ms
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

Customer Table	
Field Name	Data Type
Customer ID	Short Text
Title	Short Text
First Name	Short Text
Last Name	Short Text
AddressLine 1	Short Text
Town	Short Text
County	Short Text
PostCode	Short Text
CardType	Short Text
CardNo	Short Text
ExpiryData	Date/Time

The post code can just have the format LL9 9LL (where 9 is a number and L is a letter).

General	
Field Size	255
Format	
Input Mask	LL9\ 9LL
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	Yes (Duplicates OK)
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

	Field Name	Data Type	
🔑	Customer ID	Short Text	
	Title	Short Text	
	First Name	Short Text	
	Last Name	Short Text	
	AddressLine 1	Short Text	
	Town	Short Text	
	County	Short Text	
	PostCode	Short Text	
	CardType	Short Text	
	CardNo	Short Text	
	ExpiryData	Date/Time	

The card type must be one of the following: (Socket, vista, Armenian Express, Fran card or Mister Card). If a customer enters any other card that is not listed above. Therefore, pop up will be displayed with a message: "Invalid Card Type use a different card type".

General	Lookup
Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	"Armenian Express" Or "Socket" Or "Mister Card" Or "Vista" Or "Francard"
Validation Text	Invalid card type
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

	Field Name	Data Type
	Customer ID	Short Text
	Title	Short Text
	First Name	Short Text
	Last Name	Short Text
	AddressLine 1	Short Text
	Town	Short Text
	County	Short Text
	PostCode	Short Text
	CardType	Short Text
	CardNo	Short Text
	ExpiryData	Date/Time

The credit or debit card should contain 12 characters; Since the field, size has been set to 12 characters.

General	Lookup
Field Size	12
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

Customer Table	
Field Name	Data Type
Customer ID	Short Text
Title	Short Text
First Name	Short Text
Last Name	Short Text
AddressLine 1	Short Text
Town	Short Text
County	Short Text
PostCode	Short Text
CardType	Short Text
CardNo	Short Text
ExpiryData	Date/Time

The card validity date will be in the following format: DD/MM/YYYY, cards with any other formats will not be accepted.

General	
Format	
Input Mask	00/00/0000;0;_
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Text Align	General
Show Date Picker	For dates

ORDER TABLE

Order Table		
	Field Name	Data Type
▶	Order ID	Short Text
	Order Date	Date/Time
	CD No	Short Text
	CD Title	Short Text
	Artist	Short Text
	Customer ID	Short Text
	CD Number	Short Text

The Order ID must have the format (LLL999999) where L stands for a letter and 9 as a number. The size of the field also is set to 9 characters because an id can only contain 9 characters.

General		Lookup
Field Size	9	
Format		
Input Mask	LLL999999	
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	Yes	
Allow Zero Length	Yes	
Indexed	Yes (No Duplicates)	
Unicode Compression	No	
IME Mode	No Control	
IME Sentence Mode	None	
Text Align	General	

Order Table	
Field Name	Data Type
Order ID	Short Text
Order Date	Date/Time
CD No	Short Text
CD Title	Short Text
Artist	Short Text
Customer ID	Short Text
CD Number	Short Text

The order Date should be in this format: DD/MM/YYYY

General	
Format	
Input Mask	00/00/0000;0;_
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Text Align	General
Show Date Picker	For dates

PRODUCT TABLE

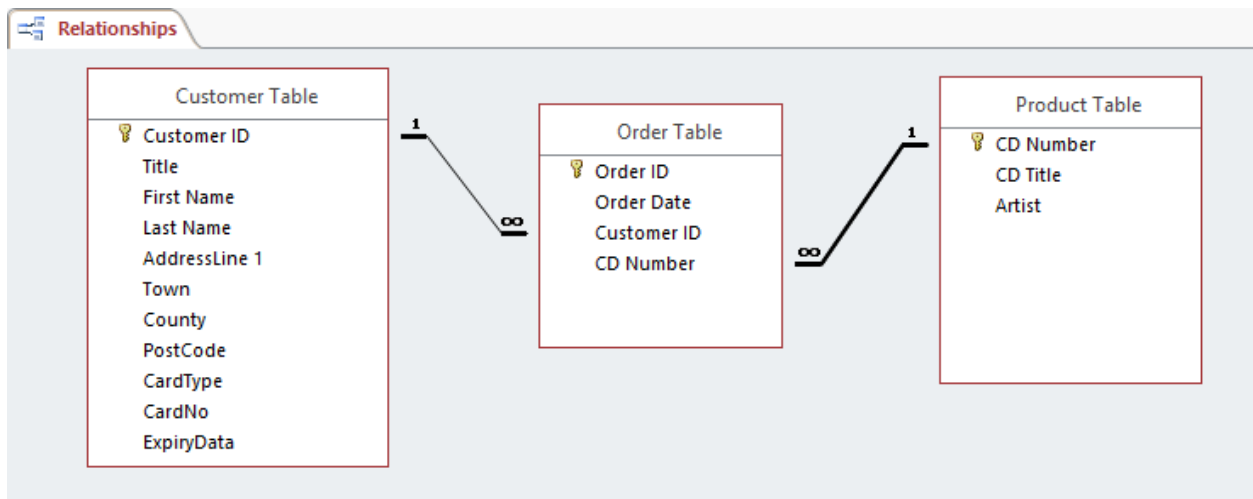
Order Table		Product Table	
Field Name		Data Type	
CD Number		Short Text	
CD Title		Short Text	
Artist		Short Text	

The CD number must have the following format LLLL999999. Also it must contain only 10 digits.

General		Lookup
Field Size	255	
Format		
Input Mask	LLLL999999	
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	Yes	
Allow Zero Length	Yes	
Indexed	Yes (No Duplicates)	
Unicode Compression	No	
IME Mode	No Control	
IME Sentence Mode	None	
Text Align	General	

IMPLEMENTATION OF THE RELATIONSHIP

After the customer table, order table and product table was implemented, I established a one to many relationship between the two tables. The below captured screenshot shows the implementation of the relationship.



Before setting up the relationship, I implemented referential integrity between both tables. The above screenshot shows how did referential integrity enforce between two tables. Alongside referential integrity, I enforced Cascade Update related fields and Cascade Delete related records to maintain data consistency.

Edit Relationships ? X

Table/Query:	Related Table/Query:
Customer Table	Order Table
Customer ID	Customer ID

☒ Enforce Referential Integrity
☒ Cascade Update Related Fields
☒ Cascade Delete Related Records

Relationship Type: One-To-Many

OK
Cancel
Join Type..
Create New..

Edit Relationships ? X

Table/Query:	Related Table/Query:
Product Table	Order Table
CD Number	CD Number

☒ Enforce Referential Integrity
☒ Cascade Update Related Fields
☒ Cascade Delete Related Records

Relationship Type: One-To-Many

OK
 Cancel
 Join Type..
 Create New..

TESTING

1. Testing the length of the customer ID

Customer						
Customer ID	Title	First Name	Last Name	AddressLine	Town	
00012	MR	SADEESHA	JAYAWEERA	36/A BOLLEGOI	KANDY	


The customer ID should only be 5 digits.

You can't enter in excess of 5 digits Because courser doesn't allow to move any further after the 5 digits since length check is used.

2. Entering Existing Customer ID

Customer ID	Title	First Name	Last Name	AddressLine	Town	Country	PostCode	CardType
00012	MR	SADEESHA	JAYAWEERA	36/A BOLLEGOI	KANDY	USA		
00012	Ms	SADEESHA	MAIDEN	45/AA NIDJJD	KANDY	USA		

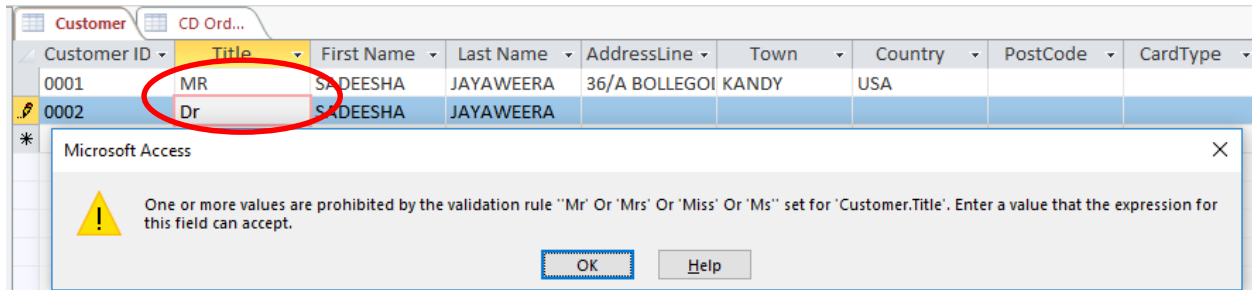
Microsoft Access

 The changes you requested to the table were not successful because they would create duplicate values in the index, primary key, or relationship. Change the data in the field or fields that contain duplicate data, remove the index, or redefine the index to permit duplicate entries and try again.

OK Help

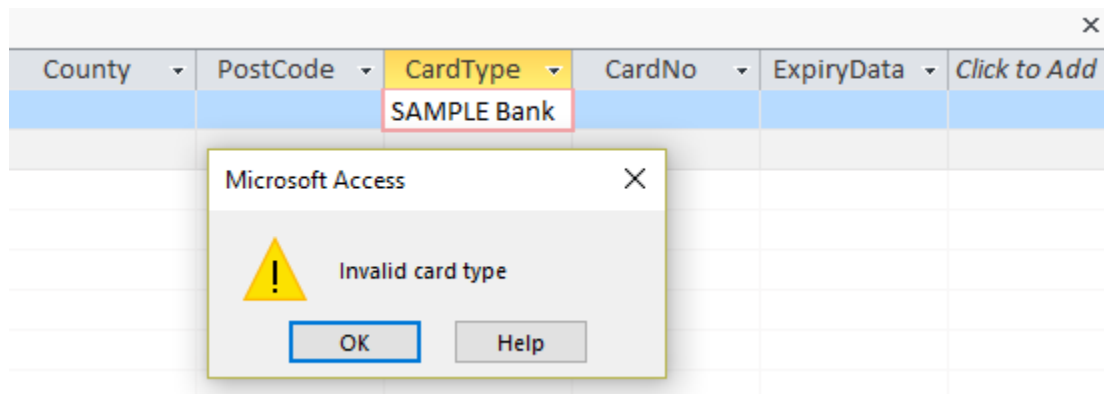
3. An error message showed on the sheet because the primary key is the same so two customers can't have the same Customer ID.

Entering an Invalid title



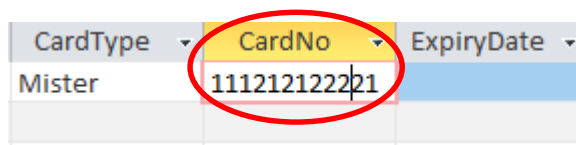
An error message shown prompting the user to utilize accompanying titles: Mr, Mrs, or Ms. An error message shown prompting the user utilize accompanying titles: Mr, Mrs, Miss or Ms.

4. Entering an Invalid Card Type



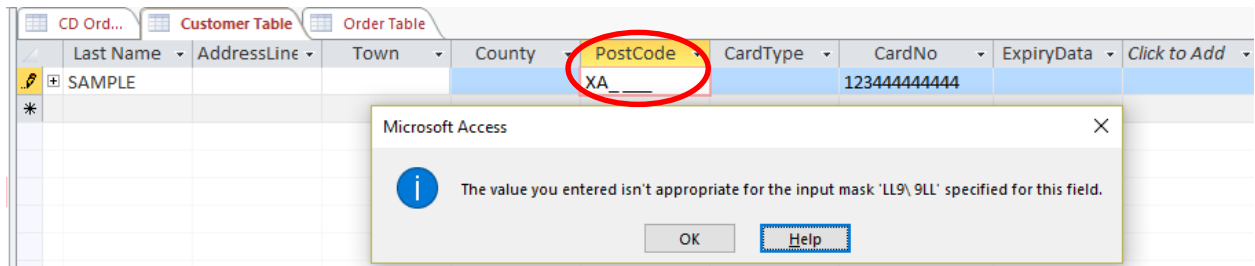
An error message displayed since the card type can only be following: Socket, Mister card, Armenian Express and Francard due to the list check used.

5. Testing the length of the Card Number



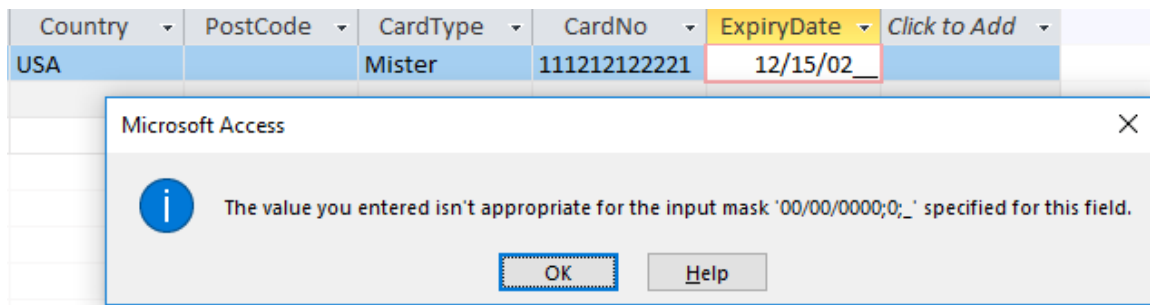
Just 12 digits are permitted because the cursor doesn't move any further after the 12 digits because of the length check utilized.

6. Entering Invalid format for the postal code/post code



An error message showed since the input mask just only permits the format LL9 9LL.

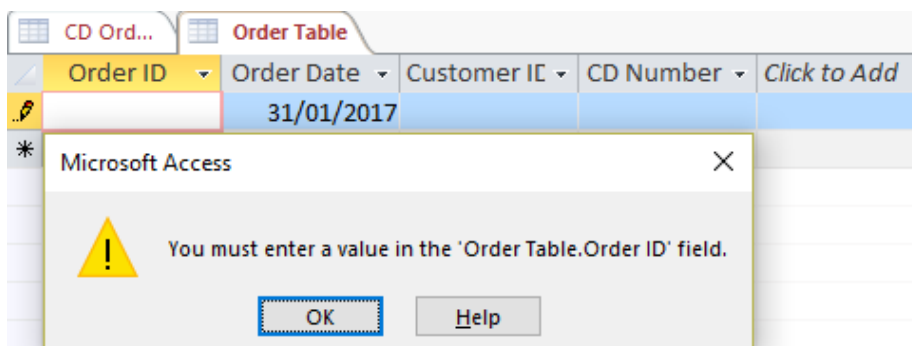
7. Entering an Invalid Format for Expiry Date



Since the input mask only allows the following format: DD/MM/YYYY an error occurred and it is shown by the above screenshot.

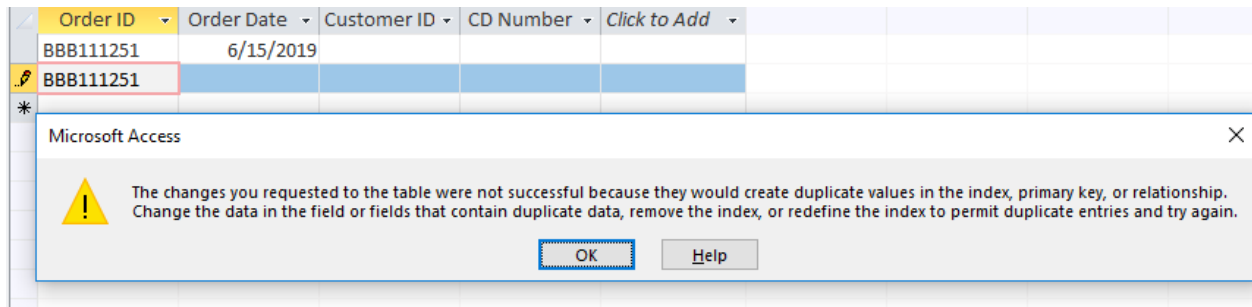
ORDER TABLE TESTING

1. Entering invalid value for Order ID



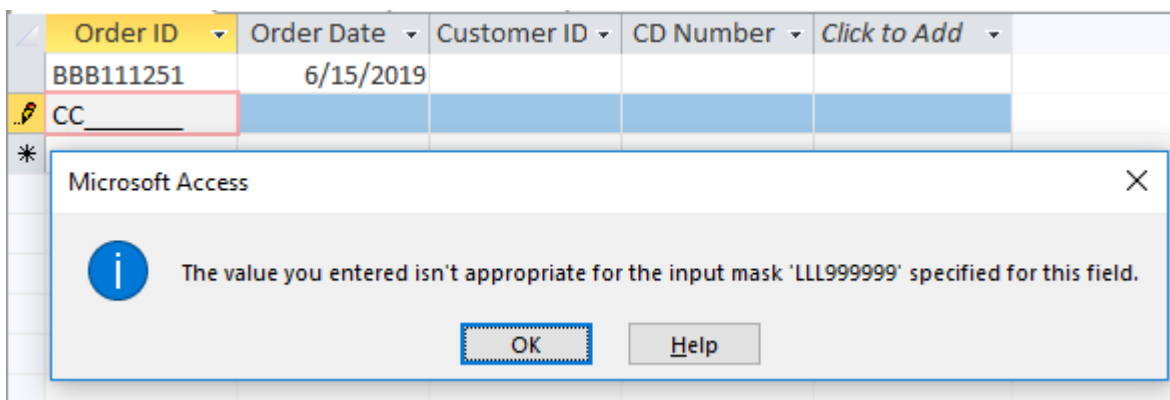
An error message showed since the primary key can't have an invalid value due to the entity Integrity.

2. Entering existing Order ID



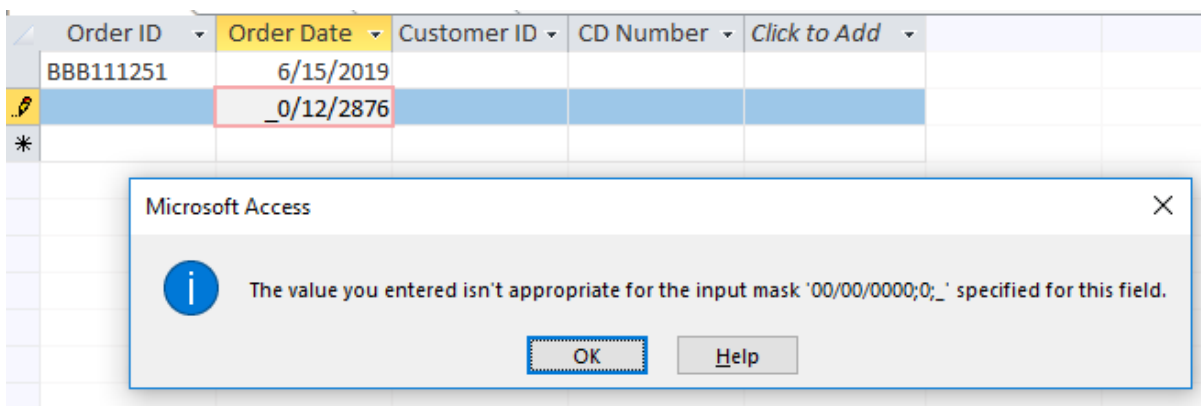
An error message displayed because there are duplicate values in the Order ID so it doesn't allow to duplicate values due to entity integrity. Theby the primary key should be unique.

3. Entering an Invalid Format for Order ID



An error message showed since the input mask just only allows the following format: DD/MM/YYYY.

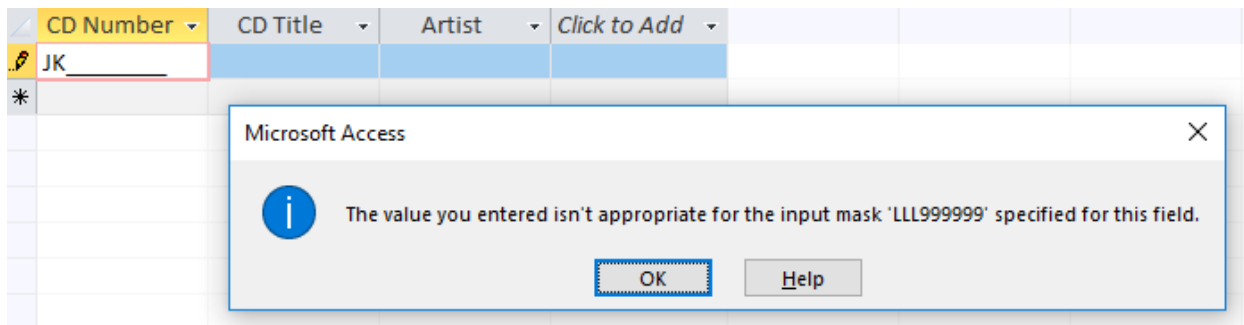
4. Entering an invalid format for CD number



An error message showed since the input mask only permit the following format: DD/MM/YYYY.

TESTING THE PRODUCT TABLE

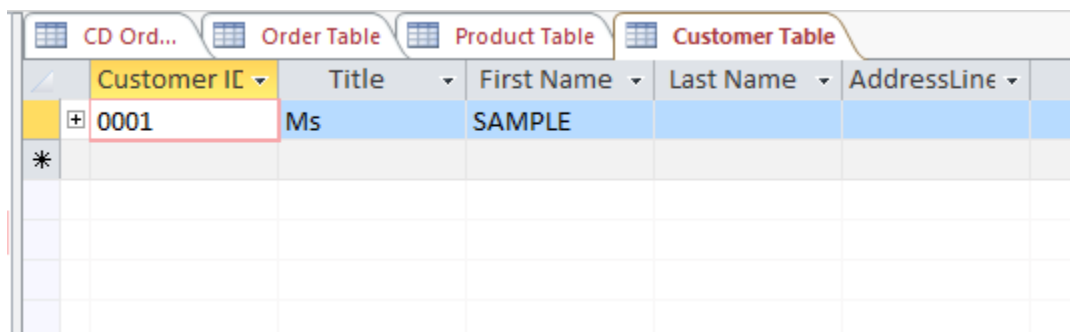
1. Entering an Invalid Format for CD Numbers

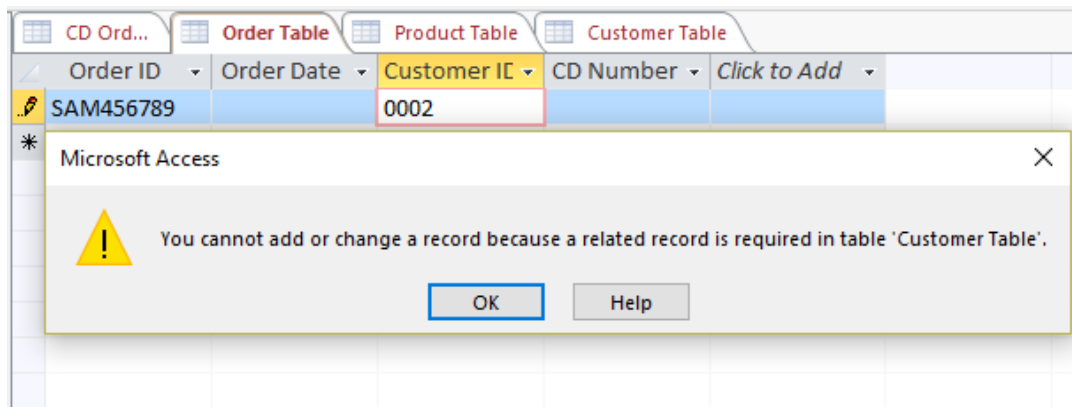


As I mentioned above an error message showed since the input mask only allows the following format LLL999999.

Because of the tables being connected, the tables can't have mismatching values.

As an eg: The customer ID on order table and customer table should be same. However, if it's not then an error message will be shown.





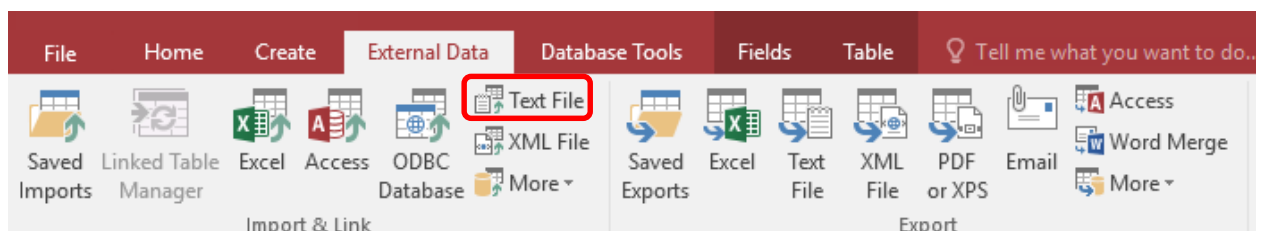
IMPORTING DATA

After the database was implemented and fully tested, the next step was to import dataset into the relevant tables. I did this task in two ways.

Below, the entire process is explained in detail using the screenshots.

IMPORTING DATA INTO THE DATABASE

1. I selected external data from the top menu > Text File, Screenshot is shown below.



2. Click on the “browse” and then choose the text file from the file location after that click ok.

4. Tapping on this separates the table as per field names. Other delimiter options are also available but “comma” is chosen because commas are used in the text file. Therefore, the different fields are isolated by a comma. Then click next.

Import Text Wizard

What delimiter separates your fields? Select the appropriate delimiter and see how your text is affected in the preview below.

Choose the delimiter that separates your fields:

☐ Tab ☐ Semicolon ☒ Comma ☐ Space ☐ Other:

☒ First Row Contains Field Names

Text Qualifier:

Order Number	CD Number	Order Date	CD Title	Artist
AAb070402	Diab190617	30/7/2005 00:00:00	Devils Dance	Diablo
AAc068536	Majo846779	25/4/2005 00:00:00	American Garbage	Major League
AAc071752	Lime216490	12/11/2005 00:00:00	15 minutes of Fame	Lime Light
AAo066779	Domi430436	15/1/2005 00:00:00	Happy Train	Dominoe
AAo067327	Majo846779	26/2/2005 00:00:00	American Garbage	Major League
AAo067529	Sept756186	8/3/2005 00:00:00	First Lady	September Le
AAo068040	Mell710751	2/4/2005 00:00:00	Armadillo Nights	Mellow Yello
AAo069152	Seko501282	21/5/2005 00:00:00	Hiding behind the Future	Sekond Site
AAo069513	Deli1136077	6/6/2005 00:00:00	Matthew, Mark, Luke and Norbert	Deliverance
AAo071601	Blaz488886	29/10/2005 00:00:00	Don't Believe what you See	Blazing T'zu
AAo071699	Twis276520	7/11/2005 00:00:00	Phantom Chains	Twisted Pear
AAo072008	Twis276520	6/12/2005 00:00:00	Phantom Chains	Twisted Pear
AAg068080	Sept756186	4/4/2005 00:00:00	First Lady	September Le
ABa066705	Twis382947	3/1/2005 00:00:00	Lost Interrupt	Twisted Pear

Advanced... Cancel < Back Next > Finish

5. The datatype is corrected by default and the data isn't indexed. So click “Next.”

Import Text Wizard

You can specify information about each of the fields you are importing. Select fields in the area below. You can then modify field information in the 'Field Options' area.

Field Options

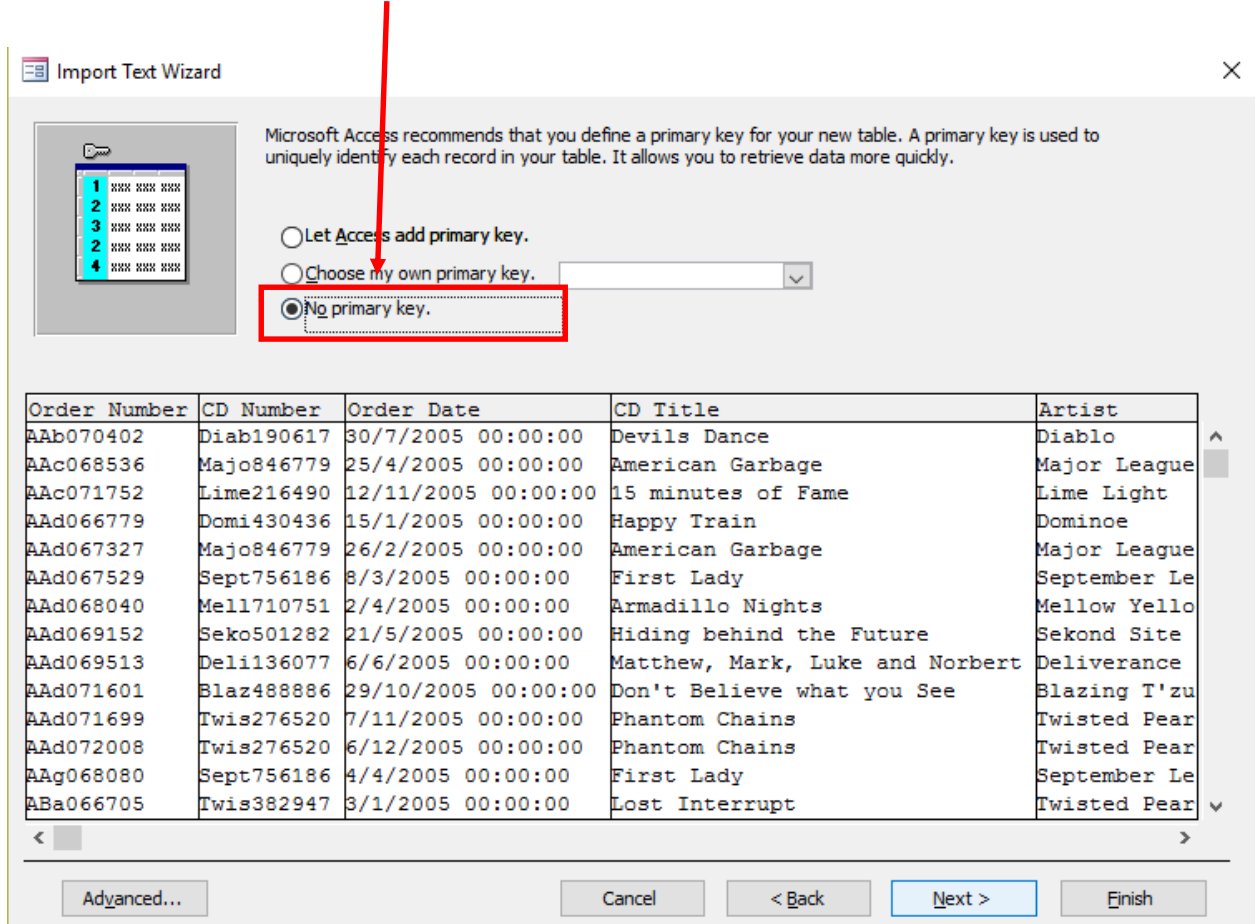
Field Name: Data Type:

Indexed: ☐ Do not import field (Skip)

Order Number	CD Number	Order Date	CD Title	Artist
AAb070402	Diab190617	30/7/2005 00:00:00	Devils Dance	Diablo
AAc068536	Majo846779	25/4/2005 00:00:00	American Garbage	Major League
AAc071752	Lime216490	12/11/2005 00:00:00	15 minutes of Fame	Lime Light
AAo066779	Domi430436	15/1/2005 00:00:00	Happy Train	Dominoe
AAo067327	Majo846779	26/2/2005 00:00:00	American Garbage	Major League
AAo067529	Sept756186	8/3/2005 00:00:00	First Lady	September Le
AAo068040	Mell710751	2/4/2005 00:00:00	Armadillo Nights	Mellow Yello
AAo069152	Seko501282	21/5/2005 00:00:00	Hiding behind the Future	Sekond Site
AAo069513	Deli1136077	6/6/2005 00:00:00	Matthew, Mark, Luke and Norbert	Deliverance
AAo071601	Blaz488886	29/10/2005 00:00:00	Don't Believe what you See	Blazing T'zu
AAo071699	Twis276520	7/11/2005 00:00:00	Phantom Chains	Twisted Pear
AAo072008	Twis276520	6/12/2005 00:00:00	Phantom Chains	Twisted Pear
AAg068080	Sept756186	4/4/2005 00:00:00	First Lady	September Le
ABa066705	Twis382947	3/1/2005 00:00:00	Lost Interrupt	Twisted Pear

Advanced... Cancel < Back Next > Finish

6. Since this is just a temporary table, so primary key is not required because primary key will be set when analyzing the data. "Click next"



Import Text Wizard

Microsoft Access recommends that you define a primary key for your new table. A primary key is used to uniquely identify each record in your table. It allows you to retrieve data more quickly.

☐ Let Access add primary key.

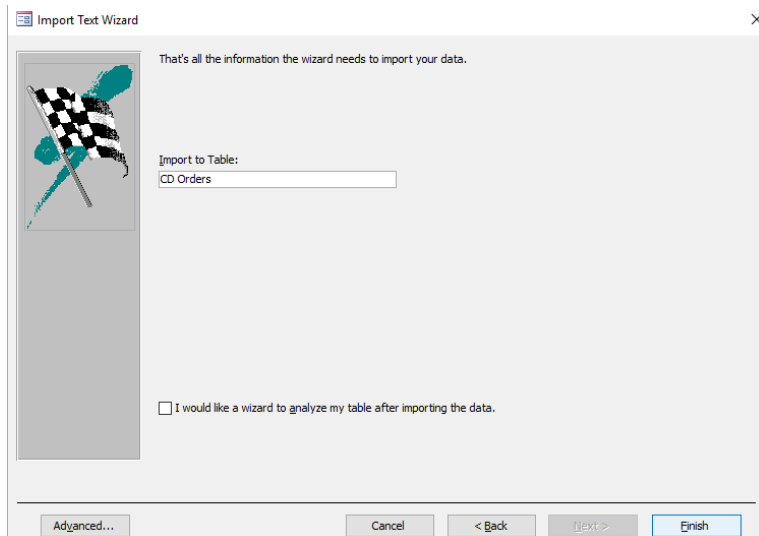
☐ Choose my own primary key.

☒ No primary key.

Order Number	CD Number	Order Date	CD Title	Artist
AAb070402	Diab190617	30/7/2005 00:00:00	Devils Dance	Diablo
AAc068536	Majo846779	25/4/2005 00:00:00	American Garbage	Major League
AAc071752	Lime216490	12/11/2005 00:00:00	15 minutes of Fame	Lime Light
AAAd066779	Domi430436	15/1/2005 00:00:00	Happy Train	Dominoe
AAAd067327	Majo846779	26/2/2005 00:00:00	American Garbage	Major League
AAAd067529	Sept756186	8/3/2005 00:00:00	First Lady	September Le
AAAd068040	Mell710751	2/4/2005 00:00:00	Armadillo Nights	Mellow Yello
AAAd069152	Seko501282	21/5/2005 00:00:00	Hiding behind the Future	Sekond Site
AAAd069513	Deli136077	6/6/2005 00:00:00	Matthew, Mark, Luke and Norbert	Deliverance
AAAd071601	Blaz488886	29/10/2005 00:00:00	Don't Believe what you See	Blazing T'zu
AAAd071699	Twis276520	7/11/2005 00:00:00	Phantom Chains	Twisted Pear
AAAd072008	Twis276520	6/12/2005 00:00:00	Phantom Chains	Twisted Pear
AAAg068080	Sept756186	4/4/2005 00:00:00	First Lady	September Le
ABa066705	Twis382947	3/1/2005 00:00:00	Lost Interrupt	Twisted Pear

Advanced... Cancel < Back Next > Finish

7. User can change the name of the database if he/she want.



Import Text Wizard

That's all the information the wizard needs to import your data.

Import to Table:
CD Orders

☐ I would like a wizard to analyze my table after importing the data.

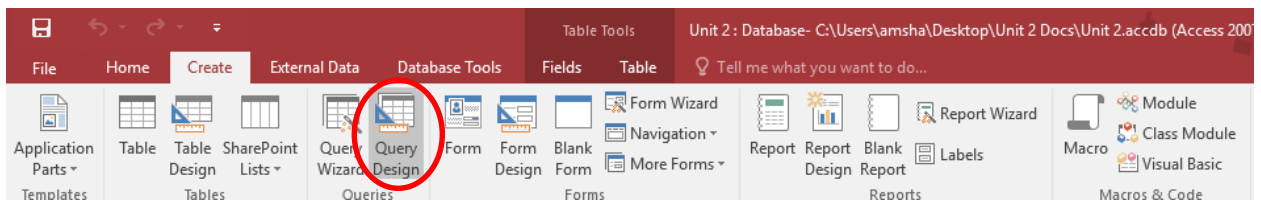
Advanced... Cancel < Back Next > Finish

8. The screenshot below shows the data imported to the temporary table

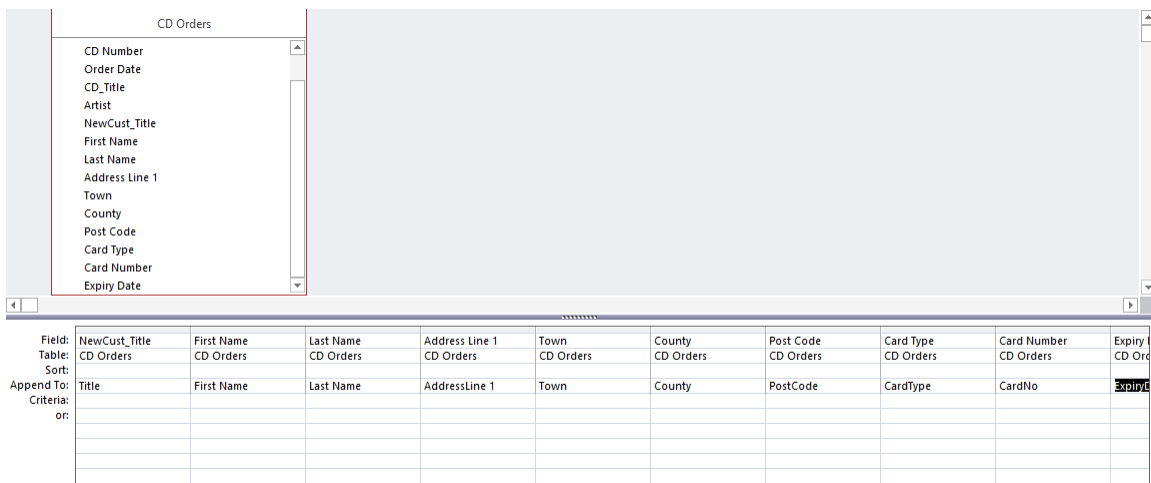
CD Orders												
Order Num	CD Number	Order Date	CD Title	Artist	NewCust_Ti	First Name	Last Name	Address Lin	Town	County	Post Code	
IRA067636	Sept756186	09/01/2005	First Lady	September Le	Mr	Ian	Radcliffe	37 Knowle Pa	Akeham	Somerset	AK0 0KW	
DUs070825	Blaz488886	01/09/2005	Don't Believe	Blazing T'zun	Mr	David	Usher	3 Goose Park	Akeham	Yorkshire	AK0 6HG	
BFI067311	Slyd400640	25/02/2005	Not Nearly En	Slyde Show	Ms	Brenda	Finch	50 Kildaire Clo	Akeham	Kent	AK0 7VM	
Ted070499	Larr412793	07/08/2005	More Stuff	Larry P	Mr	Terry	Edwards	94 Furze Close	Akeham	Devon	AK0 9CG	
NKe071095	Seko501282	20/09/2005	Hiding behind	Second Site	Ms	Nicola	Keane	6 Haydn Rd	Akeham	Cheshire	AK0 9VV	
Sis071266	Lime216490	02/10/2005	15 minutes of	Lime Light	Mr	Stephen	Isaac	65 Caswell Par	Akeham	Cambridgeshir	AK0 9XU	
FMo071017	Seko501282	08/07/2005	Hiding behind	Second Site	Ms	Fiona	Morley	65 Belmore Str	Akeham	Lincolnshire	AK1 2EX	
RTA069895	Seko501282	25/06/2005	Hiding behind	Second Site	Ms	Rachel	Taylor	64 Coronation	Akeham	Leicestershire	AK1 4EB	
JRe071354	Twis276520	08/10/2005	Phantom Chair	Twisted Pear	Mrs	Jessie	Rendell	63 Radford Par	Akeham	Hampshire	AK1 4Y1	
MW0a068027	Major846779	01/04/2005	American Garb	Major League	Mrs	Marjorie	Waldon	67 Croft Close	Akeham	Worcestershir	AK1 5VD	
Sir069178	Seko501282	22/05/2005	Hiding behind	Second Site	Mr	Stephen	Irvine	65 Kestral Gro	Akeham	Cambridgeshir	AK1 5XD	
HCo070057	Mind454813	05/07/2005	Mindless Song	Mindless	Mr	Herbert	Cobham	4 Southport De	Akeham	Yorkshire	AK2 2HS	
LGo067960	Sept756186	29/03/2005	First Lady	September Le	Mr	Lloyd	Goddard	2 Chaucer Clo	Akeham	Somerset	AK2 5CK	
BFI069028	Blac212798	16/05/2005	Agincourt	Black Knight	Mr	Barry	Finnegan	51 Bliss Close	Akeham	Middlesex	AK2 7TH	
ACa067032	Sept756186	05/02/2005	First Lady	September Le	Mr	Alex	Card	39 Tongham Pe	Akeham	Yorkshire	AK2 8XN	
TBa071116	Twis276520	21/09/2005	Phantom Chair	Twisted Pear	Miss	Tracy	Barnard	51 Raven Ban	Akeham	Middlesex	AK4 3AJ	
WRa067657	Sept756186	14/03/2005	First Lady	September Le	Mr	William	Raines	27 Croft Dell	Akeham	Norfolk	AK4 0ZJ	
VBa071868	Blaz223738	25/11/2005	Apollo 13	Blazing T'zun	Mr	Vernon	Barkham	19 Ravenstone	Akeham	East Anglia	AK4 3DW	
Nin065756	Major846779	10/03/2005	American Garb	Major League	Mr	Neil	Ince	2 Cedar Rd	Akeham	Cheshire	AK4 3JU	
UJe070148	Blaz488886	10/07/2005	Don't Believe	Blazing T'zun	Miss	Ursula	Jessop	86 Oxford Ban	Akeham	Essex	AK4 4BA	
Sis072034	Twis276520	09/12/2005	Phantom Chair	Twisted Pear	Mr	Stephen	Isaac	65 Coronation	Akeham	Cambridgeshir	AK4 5XX	
BFI069936	Slyd400640	27/06/2005	Not Nearly En	Slyde Show	Mrs	Briony	Jenkins	86 Southend B	Akeham	Essex	AK4 6BF	
RFI070503	Del1136077	07/08/2005	Matthew, Mar	Deliverance	Mrs	Rosalind	Findlay	82 Sheep Park	Akeham	Oxfordshire	AK4 8EN	
Jis070722	Twis276520	25/08/2005	Phantom Chair	Twisted Pear	Mr	Jack	Isaac	28 Cromwell C	Akeham	Northampton	AK4 8XS	

APPENDING DATA TO THE CUSTOMER TABLE

The below screenshot shows the designview of the append query created to transfer the customer records from the temporary table to the customer table.

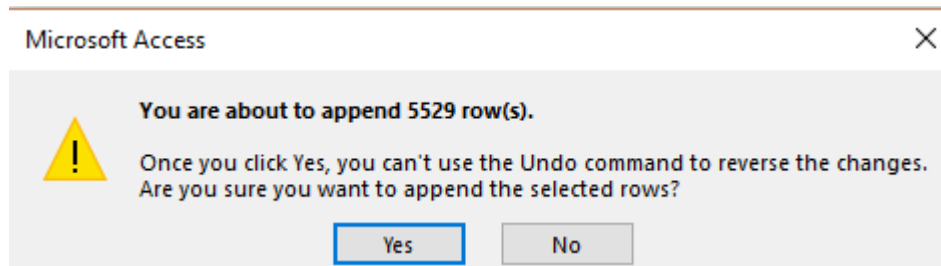
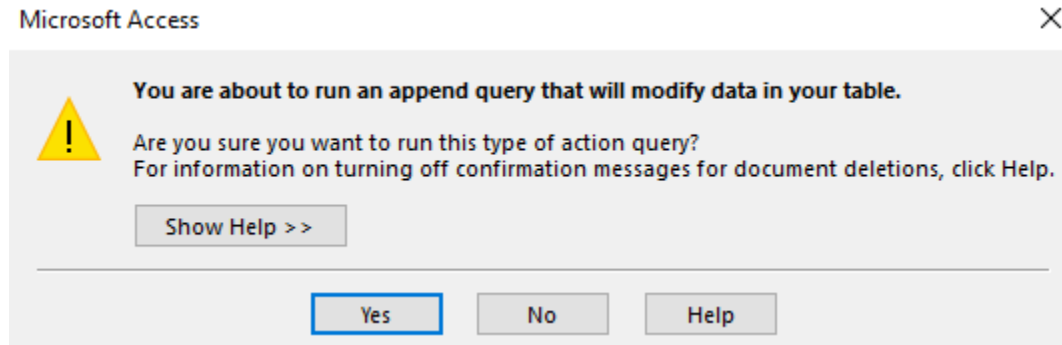


By clicking on the Query Design, transfer the temporary table data into the customer table



After the query shown above was completed, it was executed.

Once it was done a confirmation two confirmation messages will be displayed which are requested in order to run the append query.



Below Screenshot shows the customer table after appending query.

Customer Table	Customer ID	Title	First Name	Last Name	AddressLine	Town	County	PostCode	CardType	CardNo	ExpiryData	Click to Add
	1	Mr	Andrew	Abbott	90 London Ave	Marchington	Cambridgeshir	MA3 3NZ	Socket	178213795803	31/12/2006	
	2	Mr	Andrew	Acott	67 St Peters Rd	Milton Redbric	Kent	MI2 8TC	Armenian Expi	335788988214	30/11/2010	
	3	Ms	Ann	Ackroyd	32 Cromwell B	Elfpool	Nottinghamsh	EL2 4BO	Armenian Expi	661645466098	30/04/2006	
	4	Mr	Andrew	Adair	12 Tongham Gr	Stonebridge	Devon	ST7 4LT	Socket	730538202368	30/09/2008	
	5	Miss	Ann	Adams	33 Inkpenn Rd	Loddon Wells	Lincolnshire	LO2 0ZO	VISTA	462483136745	30/06/2010	
	6	Ms	Ann	Adams	56 Lambs Park	Lingford	Surrey	LI7 7MK	VISTA	593813146316	31/07/2007	
	7	Mr	Alan	Adair	100 Southend	Mireton	Oxfordshire	MI0 5JE	VISTA	006945905034	31/08/2006	
	8	Ms	Annie	Adamson	35 Fortrose Pa	Barchington	Lancashire	BA4 4CQ	VISTA	432303796301	31/07/2006	
	9	Mr	Alex	Adams	9 Acacia Ave	Ashbridge	Hampshire	AS1 2AX	Socket	705037247922	30/04/2009	
	10	Ms	Ann	Adams	56 Southport C	Lingford	Surrey	LI7 0MT	VISTA	523106893487	31/10/2010	
	11	Mr	Alan	Adamson	99 Chaucer Clo	Merket Hyam	Durham	ME2 8VY	VISTA	460828307601	31/07/2009	
	12	Ms	Annie	Adamson	35 Caesars Rd	Brimcastle	Lincolnshire	BR3 4WQ	Mister Card	572549634183	31/12/2008	
	13	Mr	Alan	Agnew	68 Crowe Rd	Garside	Cornwall	GA8 2GM	VISTA	922951831775	31/05/2010	
	14	Mr	Alan	Barkham	23 St Peters Rd	Caterham	Yorkshire	CA4 0PA	VISTA	646387705563	31/01/2006	
	15	Ms	Ann	Barnard	47 Shipley Rd	Camberwell	Nottinghamsh	CA9 7IP	Mister Card	937770998097	31/07/2008	
	16	Mr	Alex	Barnard	24 Shipley Clo	Torkston	Derbyshire	TO0 5VU	VISTA	812909016492	31/03/2006	
	17	Mr	Andrew	Barr	36 Exeter Grov	Lowmoor	Lincolnshire	LO7 9ZK	VISTA	557415986108	28/02/2008	
	18	Mr	Andrew	Barratt	4 Bliss Close	Petersham	Suffolk	PE1 8LK	VISTA	037226753068	30/09/2010	
	19	Mr	Alan	Barnard	69 Lancer Park	Graceford	Cornwall	GR9 8TX	Mister Card	462512765582	31/01/2007	
	20	Mr	Alex	Barkham	24 Peabody Rd	Oakridge	Yorkshire	OA3 8PW	VISTA	626161608210	31/03/2006	
	21	Mr	Alex	Barr	70 Southport C	Grayston	Cornwall	GR9 2TG	VISTA	402859547982	30/11/2010	
	22	Mrs	Ann	Barratt	47 Strathclyde	Harchester	Durham	HA6 5ZB	VISTA	485922621387	31/03/2006	
	23	Mr	Alex	Barnwell	24 Denton Rd	Tringford	Northumberla	TR4 2JB	Mister Card	447694288097	31/01/2010	
	24	Ms	Annie	Barratt	1 Barnes Grove	Nailsham	East Anglia	NA7 8WV	VISTA	455850157954	28/02/2007	

APPENDING DATA TO THE ORDER TABLE

The below captured screenshot shows the design view of the append query created to transfer the order records from the temporary data table to the order table.

Query1

CD Orders

*

Order Number
CD Number
Order Date
CD_Title
Artist
NewCust_Title
First Name
Last Name
Address Line 1
Town
County
Post Code

Field:	Order Number	Order Date	CD Number
Table:	CD Orders	CD Orders	CD Orders
Sort:			
Append To:	Order ID	Order Date	CD Number
Criteria:			
or:			

After the query shown above is completed, it was executed. The below captured screenshot of the confirmation message is requested in order to run the append query.

Microsoft Access

You are about to append 5529 row(s).

Once you click Yes, you can't use the Undo command to reverse the changes. Are you sure you want to append the selected rows?

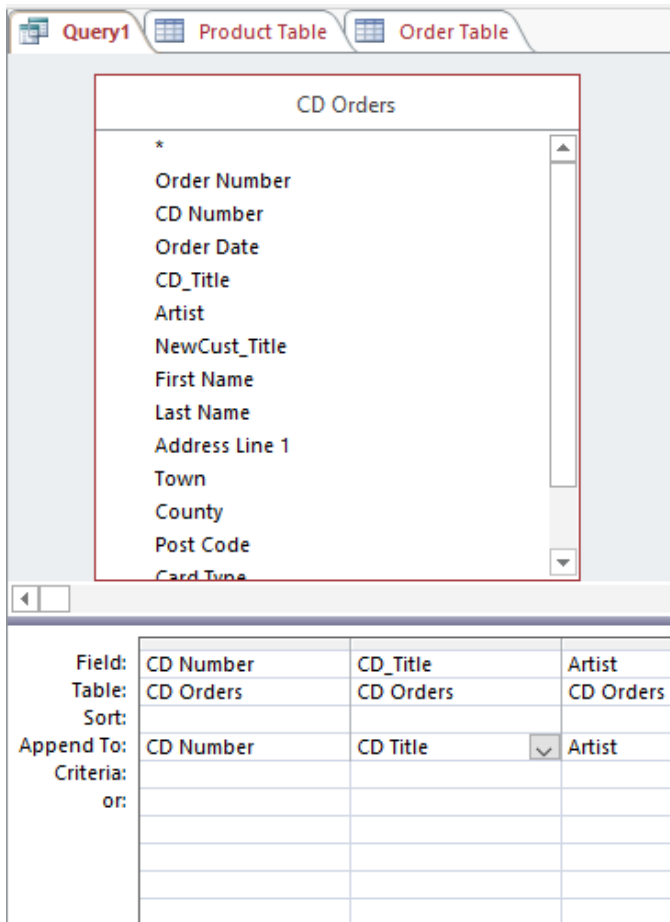
Yes No

The below captured screenshot shows the order table after appending the query

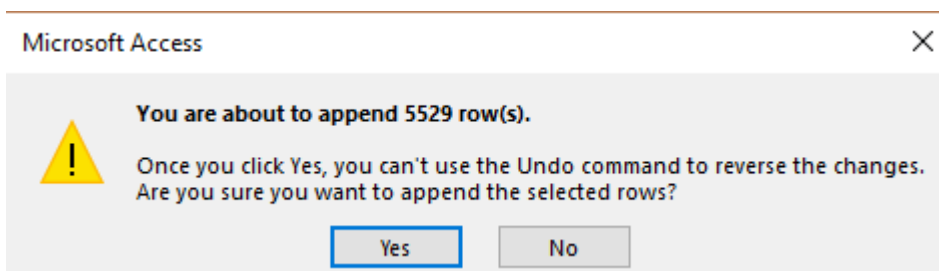
Query1	Order Table			
Order ID	Order Date	Customer IC	CD Number	Click to Add
AAb070402	30/07/2005		2 Diab190617	
AAc068536	25/04/2005		3 Majo846779	
AAc071752	12/11/2005		4 Lime216490	
AAc066779	15/01/2005		5 Domi430436	
AAc067327	26/02/2005		6 Majo846779	
AAc067529	08/03/2005		7 Sept756186	
AAc068040	02/04/2005		8 Mell710751	
AAc069152	21/05/2005		9 Seko501282	
AAc069513	06/06/2005		10 Deli136077	
AAc071601	29/10/2005		11 Blaz488886	
AAc071699	07/11/2005		12 Twis276520	
AAc072008	06/12/2005		13 Twis276520	
AAg068080	04/04/2005		14 Sept756186	
ABa066705	03/01/2005		15 Twis382947	
ABa067115	12/02/2005		16 Blac212798	
ABa067153	15/02/2005		17 HTKW770393	
ABa067583	10/03/2005		18 Slyd400640	
ABa067848	24/03/2005		19 Blac212798	
ABa069828	21/06/2005		20 Larr412793	
ABa070201	14/07/2005		21 Majo846779	
ABa070424	01/08/2005		22 Gorg592950	
ABa070662	21/08/2005		23 Twis276520	
ABa071737	11/11/2005		24 TWGG304071	
ABa071955	01/12/2005		25 Twis276520	
ABa067225	20/02/2005		26 Twis382947	

APPENDING DATA TO THE PRODUCT TABLE

The below captured screenshot shows the design view of the append query created to transfer the order records from the temporary table to the product table,



When the query shown above was finished, it was executed. The below captured screenshot of the confirmation message is requested to run the query.



The below captured screenshot shows the product table

CD Number	CD Title	Artist	Click to Add
Arma796005	Mayhem	Armageddon	
Astr225455	Younger than I	Astro Trooper	
Blac212798	Agincourt	Black Knight	
Blaz223738	Apollo 13	Blazing T'zun	
Blaz488886	Don't Believe	Blazing T'zun	
DASK254098	Questions and	Don't Ask	
Deli136077	Matthew, Mar	Deliverance	
Diab190617	Devils Dance	Diablo	
Digi471509	Sparkle	Digital Diamon	
Domi430436	Happy Train	Dominoe	
Dres150759	Far Gone	Dresden	
Gorg592950	Turned to Rock	Gorgon	
HTKW770393	Give me the M	Hot Kwizine	
Larr412793	More Stuff	Larry P	
Lime216490	15 minutes of	Lime Light	
Lime245492	Hopeless Opus	Lime Light	
Majo846779	American Garb	Major League	
Mell710751	Armadillo Nigh	Mellow Yellow	
Mind454813	Mindless Song	Mindless	
Purp814311	Dream On	Purple Moon	
Seko501282	Hiding behind	Sekond Site	
Sept756186	First Lady	September Lea	
Slyd400640	Not Nearly Enc	Slyde Show	
TWGG304071	Dinner	The Wolf Gang	

QUERIES

For this database I made three questions, the queries were led using the query design view. I have shown screenshots of the design view and also the results of the query. Moreover, I have also shown a graphical portrayal alongside how the trend can be useful to improve the business.

Query 1 – Number of orders each month

Order Table

*

🔑 Order ID
Order Date
Customer ID
CD Number

Field:	Month: MonthName(Month([Order Table].[Order Date]))	No of orders: Order ID
Table:		Order Table
Total:	Group By	Count
Sort:		Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		
or:		

Query 1		
Month	No of orders	
May	703	
April	670	
March	631	
June	595	
July	439	
September	434	
February	412	
August	391	
October	378	
November	315	
December	281	
January	280	

GRAPHICAL REPRESENTATION



REPORT

Number of orders per month	
Month	No of orders
May	703
April	670
March	631
June	595
July	439
September	434
February	412
August	391
October	378
November	315
December	281
January	280

The above screenshot shows report of the query orders per month.

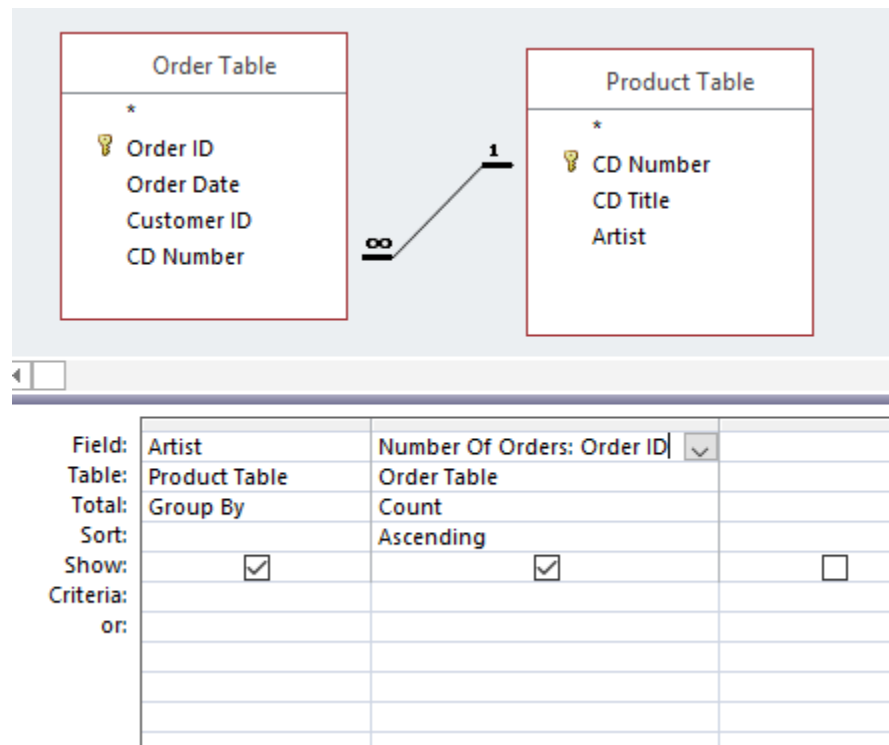
RECOMMENDATION

We can make a conclusion that the business is going well since the total number of orders placed per each month is usually over the range of 270. Also we saw that may have the highest number of orders, which is 703. However, after june number of orders were diminished. January has the least number of orders and it is 280.

The outcomes additionally demonstrate that the number of orders at the start of the year is not good compared to the other months.

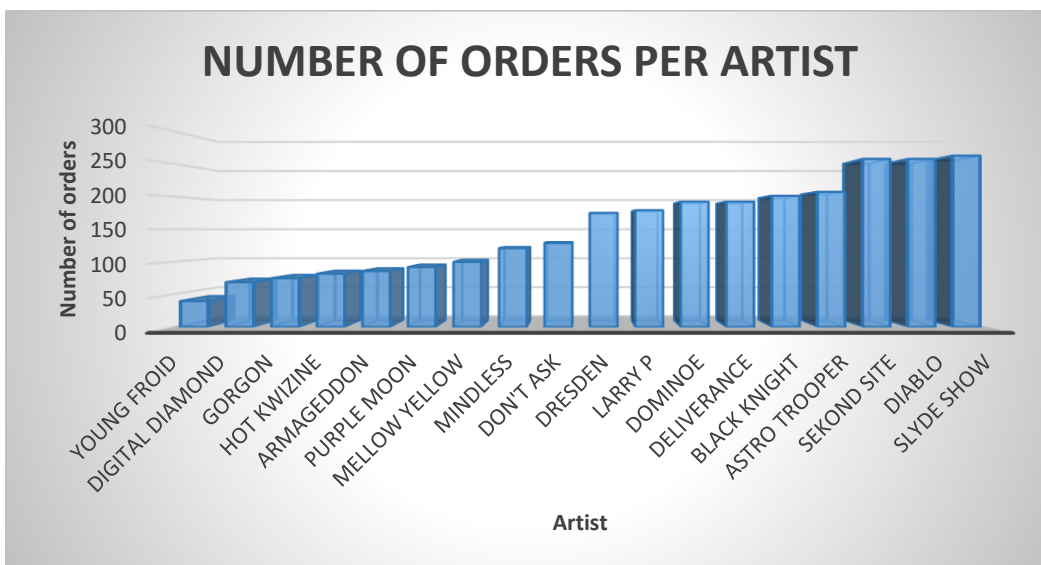
By utilizing this information, the management can offer free gifts and discounts after the june month. Also they can increase number of sales at the beginning of the year by advertising their Products.

QUERY 2 - The Most Popular Artist



Query2	
Artist	Number Of
Young Froid	40
Digital Diamond	69
Gorgon	75
Hot Kwizine	82
Armageddon	86
Purple Moon	92
Mellow Yellow	100
Mindless	121
Don't Ask	129
Dresden	175
Larry P	179
Dominoe	192
Deliverance	192
Black Knight	201
Astro Trooper	207
Sekond Site	257
Diablo	257
Slyde Show	262
The Wolf Gang	313
Lime Light	342
Major League	344
September Lea	374
Blazing T'zun	579
Twisted Pear	861

GRAPHICAL REPRESENTATION



REPORT

Number Of Orders Per Artist

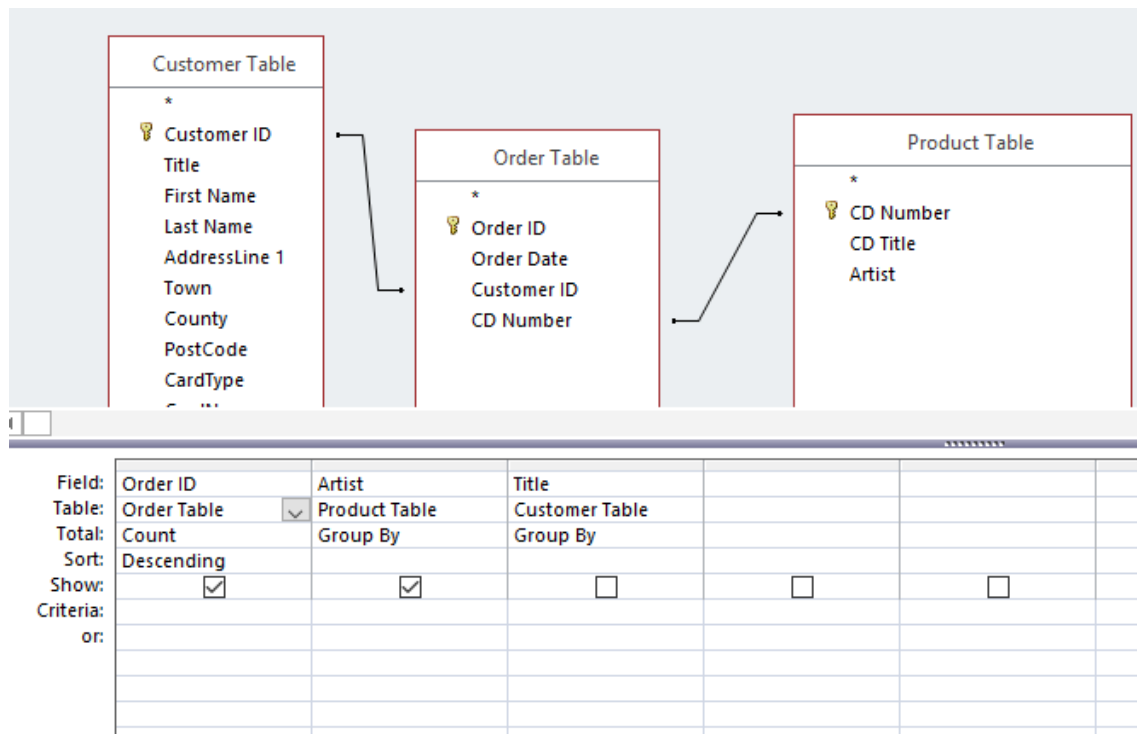
Artist	Number Of Orders
Young Froid	40
Digital Diamond	69
Gorgon	75
Hot Kwizine	82
Armageddon	86
Purple Moon	92
Mellow Yellow	100
Mindless	121
Don't Ask	129
Dresden	175
Larry P	179
Dominoe	192
Deliverance	192

RECOMMENDATION

The above results clearly show that twisted pair (861) is the most popular artist out of others. Also the young froid came to the last position due to a low number of orders. The management can find a way to decrease the selling of CDs of the least popular artist. Also, the management ought to likewise ensure that most selling CD's continue selling.

Dominoe	192
Deliverance	192
Black Knight	201
Astro Trooper	207
Sekond Site	257
Diablo	257
Slyde Show	262
The Wolf Gang	313
Lime Light	342
Major League	344
September Leaves	374
Blazing T'zun	579
Twisted Pear	861

Query 3 – Number of Male/Mens Customers per artist

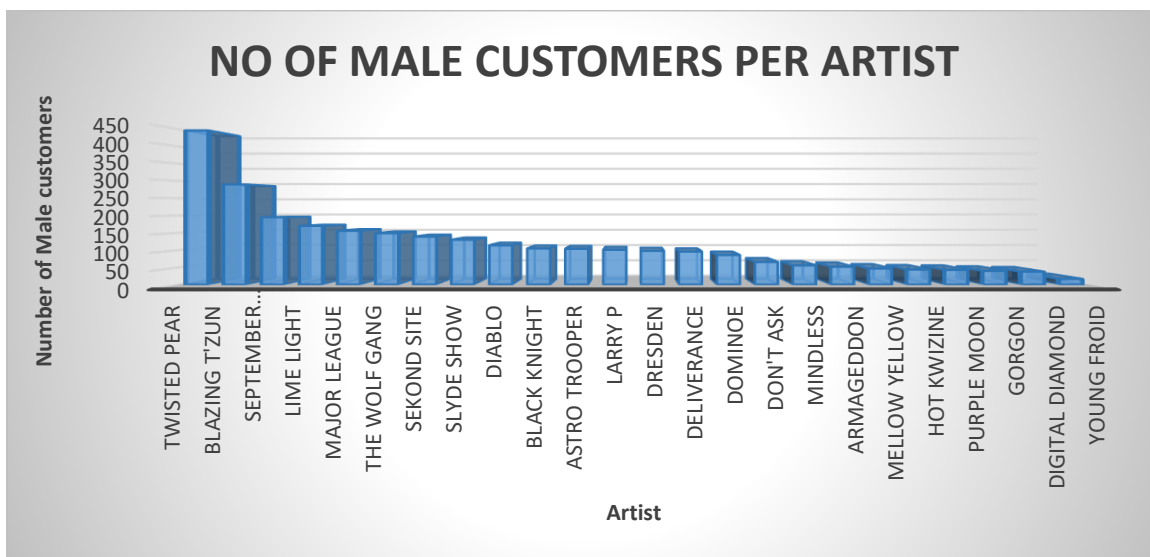


RESULTS

Results are shown below in the captured screenshot

No of Orders by Male Per Artist	
CountOfOrder ID	Artist
446	Twisted Pear
290	Blazing T'zun
195	September Leaves
170	Lime Light
156	Major League
149	The Wolf Gang
139	Sekond Site
130	Slyde Show
114	Diablo
105	Black Knight
104	Astro Trooper
101	Larry P
98	Dresden
96	Deliverance
86	Dominoe
66	Don't Ask
56	Mindless
52	Armageddon
47	Mellow Yellow
44	Hot Kwizine
43	Purple Moon
40	Gorgon
38	Digital Diamond
17	Young Froid

GRAPHICAL REPRESENTATION



REPORT

The report is shown below in the captured screenshot.

No of Orders by Male Customers Per Artist	
Artist	Number of Orders
Twisted Pear	446
Blazing T'zun	290
September Leaves	195
Lime Light	170
Major League	156
The Wolf Gang	149
Sekond Site	139
Slyde Show	130
Diablo	114
Black Knight	105
Astro Trooper	104
Larry P	101
Dresden	98
Deliverance	96
Dominoe	86
Don't Ask	66
Mindless	56
Slyde Show	130
Diablo	114
Black Knight	105
Astro Trooper	104
Larry P	101
Dresden	98
Deliverance	96
Dominoe	86
Don't Ask	66
Mindless	56
Armageddon	52
Mellow Yellow	47
Hot Kwizine	44
Purple Moon	43
Gorgon	40
Digital Diamond	38
Young Froid	17

RECOMMENDATION

The above graph clearly shows that the most popular artist among others is "twisted pair". Young Froid is the least popular artist on the other hand. There are a few numbers of artists with a lower number of orders. The orders can be increased by promoting the albums in manner way.