INDAAD COURSEWORK: THE DATABASE

Database Creation

Client:

carnabyvinyl=# \d+ cl	lient				
	Table "¡	oublic.clien	t"		
Column	Туре	Modifiers	Storage	Stats target	Description
clientid	 shanastan yanying(0)	 not null	+ extended		
	character varying(8)		:		
client_fname	character varying(15)	not null	extended		
client_lname	character varying(15)	not null	extended		
client_address	character varying(50)	not null	extended		
client_city	character varying(30)	not null	extended		
client_postcode	character varying(8)	not null	extended		
client_mobile_no	character varying(15)		extended		
client_landline_no	character varying(15)	not null	extended		
client_email	character varying(60)		extended		
Indexes:					
"client pkey" PRI	IMARY KEY, btree (client:	id)			
Referenced by:					
TABLE "consignmer	nt" CONSTRAINT "consignme	ent clientid	fkey" FORE	[GN KEY (clienti	id) REFERENCES client(clientid)
carnabyvinyl=#					

Consignment:

carnabyvinyl=# \d+ consignme									
Table "public.consignment"									
Column	Туре	Modifiers	Storage	Stats target	Description				
consignmentid	character varying(8)	not null	extended	+	+ 				
consignment type	character varying(15)		extended						
consignment_received_date	date	not null	plain						
consignment_sell_by_date	date		plain		l				
consignment_commission	numeric(3,0)	not null	main						
clientid	character varying(8)		extended						
Indexes:									
"consignment_pkey" PRIMA	ARY KEY, btree (consignme	entid)							
Foreign-key constraints:									
3 <u> </u>	key" FOREIGN KEY (client:	id) REFERENCE	S client(c	lientid)					
carnabyvinyl=#									

Album:

```
carnabyvinyl=# \d+ album
                                                        Table "public.album"
                                                                 | Modifiers | Storage | Stats target | Description
         Column
                                            Type
 albumid
                               character varying(8)
                                                                   not null
                                                                                     extended
album_title | character varying(50) | not null album_genre | character varying(20) | not null album_label | character varying(25) | not null album_catalogue_no | character varying(15) | not null album_type | character varying(10) | not null null null propers.
                                                                                     extended
                                                                                     extended
                                                                                     extended
                                                                                     extended
                                                                                     extended
                                                                                   extended
Indexes:
"album_pkey" PRIMARY KEY, btree (albumid)
 Referenced by:

TABLE "albumartist" CONSTRAINT "albumartist_albumid_fkey" FOREIGN KEY (albumid) REFERENCES album(albumid)
carnabyvinyl=#
```

Artist:

Album and artist:

Record:

carnabyvinyl=# \d+ record;		.12			
Column	Table put	olic.record" Modifiers	Storage	Stats target	Description
recordid record_name record_type record_sold_date record_media_condition record_sleeve_condition consignmentid albumid Indexes: "record_pkey" PRIMARY Foreign-key constraints: "record_albumid_fkey"	character varying(8) character varying(20) character varying(15) numeric(6,2) character varying(15) character varying(15) character varying(15) character varying(8) character varying(8)	not null	extended extended extended main extended extended extended extended extended		

Dummy Data

Client:

	yl=# select * f client_fname		client_address	client_city	client_postcode	client_mobile_no	client_landline_no	client_email
1459	Dyna	McVittie	89 Orin Trail	London	BX1 1LT	574-626-3864	62 325 303 841	dmcvittie0@usda.gov
2684	Toddie	Lamasna	14 Arkansas Point	Leeds	FH1 JS2	653-128-2302	55 412 591 844	tlamasna1@abc.net.au
5054	Gard	Short	8 Lake View Place	Liverpool	SAH 2HF	429-785-3073	86 130 680 773	gshort2@nationalgeographic.com
6734	Wynn	Del Monte	3583 Knutson Terrace	Portsmouth	SA7 GN1	259-258-3067	86 603 401 898	wdelmonte3@spiegel.de
4237	Lorene	Menis	43924 Sage Drive	London	4QE EW3	287-381-8292	79 140 224 903	lmenis4@tinyurl.com
8184	Rosanna	Leate	9202 Maple Wood Lane	Manchester	S23 2BF	660-166-3673	86 668 682 9363	rleate5@jimdo.com
3045	Chick	Dalby	1791 Prentice Alley	Plymouth	S4H 4AF	399-790-0772	62 270 490 9850	cdalby6@engadget.com
1242	Jarvis	Hellens	12551 Eastlawn Court	London	6RE E71	187-767-5390	21 984 770 624	jhellens7@lycos.com
5579	Tomasina	Samett	84930 Westport Alley	Wolverhampton	7H8 6YH	258-499-7091	35 937 342 934	tsamett8@live.com
1864	Lorianne	Wyley	29 Carey Circle	Southampton	SUH 24F	342-851-1168	57 358 728 8710	lwyley9@usatoday.com
4783	Quintin	Zanutti	9705 Texas Terrace	Sunderland	SF2 HJU	515-793-6314	54 332 653 1734	qzanuttia@nsw.gov.au
(11 rows)								
carnabyvin	yl=#							

Consignment:

consignmentid	consignment_type	consignment_received_date	consignment_sell_by_date	consignment_commission	clientid
64564561	Client	2018-02-23	2018-06-23	25	1459
64564562	HCC	2018-06-14	2018-11-21	100	2684
64564563	Client	2019-01-21	2019-07-21	50	5054
64564564	Auction	2018-07-03	2019-03-03	100	6734
64564565	Client	2018-11-02	2019-01-02	25	4237
64564566	HCC	2018-08-16	2018-11-26	100	8184
64564567	Client	2018-05-06	2018-10-06	35	3045
64564568	Client	2018-08-16	2018-12-11	25	1242
64564569	Auction	2019-02-25	2019-06-26	100	5579
64564570	Client	2018-04-18	2018-06-18	50	1864
64564571	Auction	2018-11-30	2019-02-20	100	4783
64564572	Auction	2018-10-20	2019-03-30	100	4783
64564573	Client	2018-08-16	2018-12-16	50	3045
13 rows)					

Album:

			album_label		album_release_date	aroum_cype
7418632	Scared	Rock	TonyDigital	0631	2003	Single
7 110032	Love You	Dubstep	VernerMusic	0632	2012	Multi
7418633	Jailhouse	Techno	DiscoMusicCompany	0633	2010	Multi
7418634	Jagger	Opera	AreonMusic	0634	2000	Single
7418635	I wanna dance with somebody	Dubstep	GlobalMusicCompany	0635	2007	Single
7418636 1	Wake me up	Hip-Hop	DMG	0636	2006	Multi
7418637 1	Smooth	Soul	ComodoMusic	0637	2016	Single
7418638	Rock this party	Hard Rock	ZepterMusicGroup	0638	1999	Multi
7418639	Nobody	Latin	TonyDigital	0639	1995	Single
7418640	Pump it	Hip-Hop	BuzzMusic	0640	1990	Multi
7418641	El loucha	Latin	DiscoMusicCompany	0641	2016	Multi
7418642	Too Nice	Rock	TonyDigital	0642	2012	Single
7418643 (Gone	Techno	BuzzMusic	0643	2013	Single
7418644	Get up	Soul	ComodoMusic	0644	1989	Single
7418645	Not Reality	Dubstep	VernerMusic	0645	2011	Single
7418646	In The Mood	Jazz	ComodoMusic	0646	1995	Single
7418647	Fake	Blues	ComodoMusic	0647	1983	Single
7418648 1	Spirits	Jazz	AreonMusic	0648	2011	Single
7418649 1	My Beloved	Blues	TonyDigital	0649	1979	Single
7418650	Stay with me	Soul	BuzzMusic	0650	1991	Single
20 rows)						

Artist:

```
carnabyvinyl=# select * from artist;
artistid |
                                 artist_genre
               artist_name
           Remy Polet
15673481
                                 Rock
           Gigi Madeley
14564571
                                 Dubstep
           Sharia Spurdle
15346735
                                 Techno
15325654
           Walden Atkins
                                 Opera
18678456 | Beverie Aumerle
                                 Dubstep
           Carmelina Camarena
                                 Hip-Hop
16586454
15475685
           Reeva Popplewell
                                 Soul
14899743
           Ivette Moreira
                                 Hard Rock
           Becka Issit
                                 Latin
14353566
           Benjamin Johnson
14353568
                                 Jazz
14353569 | John Lee
                                 Blues
(11 rows)
carnabyvinyl=#
```

Album and Artist:

```
carnabyvinyl=# select * from albumartist;
albumid | artistid
97418631 | 15673481
97418632
           14564571
97418633 | 15346735
97418634
           15325654
97418635
          18678456
97418636
           16586454
97418637 | 15475685
97418638
           14899743
97418639 | 14353566
97418640
           16586454
97418641 | 14353566
97418642
           15673481
97418643
          15346735
97418644
           15475685
97418645
           14564571
97418646
           14353568
97418647
           14353569
97418648
           14353568
97418649 | 14353569
97418650 | 15475685
(20 rows)
carnabyvinyl=#
```

Record:

ecordid	record_name	record_type	record_price	record_sold_date	record_media_condition	record_sleeve_condition	consignmentid	albumid
4543661	Love And Devotion	Single	21.99	2018-03-21	1	4	64564561	97418631
4543662	Too Nice	Single	39.99	Not Sold	3	4	64564561	97418642
4353462	Get It On	Long Play	13.50	Not sold	1	3	64564562	97418632
5464777	Headspace	Long Play	19.99	Not sold	3	1	64564562	97418632
1435463	Mr. Music	Long PLay	40.99	2018-07-11	3	2	64564563	97418633
1435479	Gone	Long PLay	19.99	Not sold	4	3	64564563	97418633
1534564	Shake Down Party	Single	31.99	2018-08-22	1	4	64564564	97418634
1534580	Get up	Single	31.99	Not sold	4	5	64564564	97418644
3453465	Hard Times	Single	43.99	2018-07-01	3	4	64564565	97418635
3453481	Not Reality	Single	59.99	Not sold	4	4	64564565	97418649
5546766	Hide	Long Play	25.00	2019-03-17	4	5	64564569	97418636
464774	Tough not broken	Long Play	25.99	Not sold	1	3	64564569	9741863
896467	Please Go	Single	49.99	2018-09-23	4	3	64564567	9741863
5464772	Heaven	Long Play	30.99	Not sold	1	3	64564567	9741864
2143568	True Lover	Long Play	115.99	Not sold	2	4	64564568	9741863
5464773	Stay with me	Single	110.99	Not sold	4	3	64564568	9741863
4567269	Flight Of Fancy	Single	20.99	2018-11-29	1	4	64564571	97418639
5464778	Prove Me Wrong	Long Play	10.50	Not sold	3	2	64564571	9741864
5464775	Different	Long Play	90.99	Not sold	4	4	64564570	97418640
5464771	Stay In Touch	Long Play	70.99	2018-09-11	2	4	64564566	9741864:
5464776	Time to go	Long Play	30.99	Not sold	3	4	64564566	97418643
5464788	Little More	Single	49.99	Not sold	1	4	64564572	9741864
5464781	Twisted	Single	29.99	Not sold	2	1	64564572	97418649
5464779	Caught up	Single	119.99	Not sold	4	4	64564573	9741864
5464780	Time to go	Single	89.99	Not sold	3	4	64564573	97418650
1664270	No Love	Long Play	14.99	Not sold	4	5	64564570	97418640

General SQL Queries

1. A costumer had his sell by date expired and his coming to pick up his consignment so the staff will search up his and give it to the client.

SELECT o.clientid, c.client_fname, c.client_lname, o.consignmentid, consignment_sell_by_date FROM client c

JOIN consignment o ON c.clientid = o.clientid

WHERE o.clientid = '8184' AND o.consignmentid='64564566';

2. A query to see how many vinyls are multi and how many are single

If a customer wants a vinyl that's single or multi the staff can search and quickly see what type of vinyls are available.

SELECT album_title, album_type, album_genre FROM album
WHERE album_genre='Soul'
ORDER BY album_type;

3. A query to see what records are not sold, CV wishes to retain data about sold records for archiving that data to see which of their clients have sold the most records.

```
arnabyvinyl-# join consignment o on r.consignmentid = o.consignmentid
arnabyvinyl-# join client c on o.clientid = c.clientid
arnabyvinyl-# WHERE NOT r.RECORD_SOLD_DATE='Not sold'
arnabyvinyl-# Group by o.clientid, o.consignmentid, r.recordid, c.client_fname, c.client_lname, r.RECORD_SOLD_DATE
arnabyvinyl-# Order by o.consignmentid;
consignmentid | clientid | client_fname | client_lname | record_name | record_price | recordid | record_sold_date
                                                                                                                                                                        21.99 | 34543661
40.99 | 31435463
31.99 | 34534564
43.99 | 33453465
70.99 | 35464771
                                                                                                                  Love And Devotion
                                                                                   McVittie
64564563
64564564
                               5054
6734
                                                    Gard
Wynn
                                                                                   Short
Del Monte
                                                                                                                  Mr. Music
Shake Down Party
                                                                                                                                                                                                              2018-07-11
2018-08-22
                               4237
8184
                                                    Lorene
Rosanna
                                                                                   Menis
Leate
 64564565
                                                                                                                  Hard Times
                                                                                                                                                                                                              2018-07-01
                                                                                                                  Stay In Touch
                               3045
5579
4783
                                                                                   Dalby
Samett
Zanutti
                                                     Chick
                                                                                                                  Please Go
                                                                                                                                                                         49.99
                                                    Tomasina
Quintin
                                                                                                                  Flight Of Fancy
```

SELECT o.consignmentid, o.clientid, c.client_fname, c.client_lname, r.record_name, r.record_price, r.recordID, r.record_sold_date
FROM record r
JOIN consignment o on r.consignmentid = o.consignmentid
JOIN client c on o.clientid = c.clientid
WHERE NOT r.record_sold_date='Not sold'
GROUP BY o.clientid, o.consignmentid, r.recordid, c.client_fname, c.client_lname, r.record_sold_date
Order by o.consignmentid;

4. Costumer might want to buy a modern album so the customer requests to see the albums that release after the year 2010 or it can be used to search up older albums i.e. before 1990.

5. This query is to search up the cheapest to the most expensive record that is in the best condition, so if a client request the best conditioned record that is Dubstep the staff can do with this query

SELECT r.consignmentid, r. record_media_condition, r.record_sleeve_condition, r.record_price a.album_genre FROM record r JOIN album a on a.albumid=r.albumid WHERE album_genre='Dubstep';

Advanced SQL Queries

1. How many record from each genre does the store has, so in case they are lacking Opera records like shown below they might want to go to Auctions to get more stock for that specific genre.

```
carnabyvinyl=# select count(albumID), album genre from album
carnabyvinyl-# group by album_genre
carnabyvinyl-# ORDER BY COUNT(albumID) DESC
carnabyvinyl-#;
count | album genre
    3 Dubstep
    3 | Soul
    2 Jazz
    2
       Blues
    2 | Rock
    2 | Techno
    2 | Latin
    2
       | Hip-Hop
    1 | Opera
    1 | Hard Rock
(10 rows)
```

SELECT count(albumID), album_genre FROM album GROUP by album_genre ORDER BY COUNT(albumID) DESC;

2. Client and their which consignments belongs to what client and the commission levels they have to pay, easy to separate from the Auction and HCC clients.

```
carnabyvinyl=# SELECT c.client_fname, c.client_Fname, c.clientID, o. consignment_commissio
carnabyvinyl-# FROM Client c
carnabyvinyl-# JOIN consignment o ON c.clientID = o.clientID
carnabyvinyl-# WHERE o. consignment_commission< '100'
carnabyvinyl-# ORDER BY o. consignment commission
carnabyvinyl-# ;
client fname | client fname | clientid | consignment commission
                                                                25
Dyna
                Dyna
                               1459
                                                               25
                               1242
Jarvis
                Jarvis
Lorene
                               4237
                                                               25
                Lorene
Chick
                Chick
                               3045
                                                               35
                                                               50
Gard
                Gard
                               5054
Lorianne
                Lorianne
                               1864
                                                               50
Chick
                Chick
                               3045
                                                               50
(7 rows)
carnabyvinyl=#
```

SELECT c.client_fname, c.client_Fname, c.clientID, o. consignment_commission FROM Client c

JOIN consignment o ON c.clientID = o.clientID

WHERE o. consignment_commission< '100'

ORDER BY o. consignment commission;

3. What records belong to what client you can see below this client has 2 consignments and has these 2 records in each and he has 4 records in total to his name.

```
carnabyvinyl=# select o.consignmentid, o.clientid, c.client fname, c.client_lname, r.record_name, r.recordID
carnabyvinyl-# from record r
carnabyvinyl-# join consignment o on r.consignmentid = o.consignmentid
carnabyvinyl-# join client c on o.clientid = c.clientid
carnabyvinyl-# where o.clientid='4783'
arnabyvinyl-# Group by o.clientid, o.consignmentid, r.recordid, c.client_fname, c.client_lname:
carnabyvinyl-# Order by o.consignmentid;
consignmentid | clientid | client_fname | client_lname |
                                                            record_name
                                                                          recordid
64564571
                                                          Flight Of Fancy
                4783
                           Quintin
                                           Zanutti
                                                                            34567269
64564571
                4783
                           Quintin
                                           Zanutti
                                                          Prove Me Wrong
                                                                            35464778
64564572
                                                                            35464781
                4783
                           Quintin
                                           Zanutti
                                                          Twisted
64564572
                4783
                           Quintin
                                           Zanutti
                                                          Little More
                                                                            35464788
(4 rows)
arnabyvinyl=#
carnabyvinyl=#
```

SELECT o.consignmentid, o.clientid, c.client_fname, c.client_lname, r.record_name, r.recordID FROM record r

JOIN consignment o on r.consignmentid = o.consignmentid

JOIN client c on o.clientid = c.clientid

WHERE o.clientid='4783'

GROUP BY o.clientid, o.consignmentid, r.recordid, c.client_fname, c.client_lname

ORDER BY o.consignmentid;

4. Average price of a consignment the staff can just search up the consignment id and see what each client's consignment average price is.

SELECT c.clientid, c.consignmentid, round(AVG(r.record_price) ,2) as Avarage_Price FROM RECORD r

JOIN consignment c

ON r.consignmentid = c.consignmentid

WHERE r.consignmentid= '64564567'

GROUP BY r.consignmentid, c.consignmentid, c.clientid

ORDER BY c.consignmentid;

5. Using this query allows the staff to see all the artist and their albums BUT adding the WHERE clause to search for a specific artist, a costumer what's to his favorite artist records, costumer gives the artists name and the staff search the database.

SELECT a.album_title, n.artist_name
FROM album a
JOIN albumartist r on a.albumID = r.albumID
JOIN artist n
ON n.artistID = r.artistID
WHERE n.artist name='Reeva Popplewell';

ASSUMPIONS:

- 1. The reason for having consignment ID and album ID in the record table is to know what records are in each consignment and also to see what records belong to what album.
- 2. We have a lot of identification in this data base so each ID column for each table is different in a way so it's easier to find. The client id are always 4 digits, consignment id always starts with a 6, album id start with a 9, artist id start with a 1 and record id starts with 3.
- 3. HCC is for House clearance companies
- 4. HCC and the auction vinyls are on a 100% commission while client vinyls take 25, 35 or 50%.
- 5. The date format is YYYY-MM-DD
- 6.Consignment_type refers to what type of client owns the consignment.
- 7.Record_date_sold is varchar because some records are not sold yet so we don't have a date so they are labeled as 'not sold', and we know that CV wishes to retain data about sold records for archiving that data to see which of their clients have sold the most records.
- 8.Albumid is in the record table because we need the connection between the record and the album, if a album is multi it will have multiple record with it and we have to separate them from single

that have one record in them Which record belongs to what album and what records are in the consignments

9.The conditions for the record are broken into 5 conditions Mint=1
Near Mint=2
Very Good =3
Good=4

Fair=5