

<https://chartio.com/resources/tutorials/how-to-create-a-user-and-grant-permissions-in-oracle/>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Public** | **Owner** | **Provider** | **Guest** |
| **Guest** |  |  |  | insert |
| **Hire\_Contract** |  |  | Select, insert, update & delete | insert |
| **Item\_for\_Hire** | select | Select, insert, update & delete | Select, insert, update & delete | select |
| **Provider** | select | Select, insert, update & delete |  |  |
| **Room** | select | Select, insert, update & delete |  |  |
| **Stay** | Select & insert | Select & update |  |  |

**GRANT**

**SELECT,**

**INSERT,**

**UPDATE,**

**DELETE**

**ON**

**schema.books**

**TO**

**books\_admin;**



Select count(\*)

From guest

join stay on ( stay.guest\_no = guest.guest\_no)

where stay.startdate between TRUNC(TO\_DATE(’05-01-2018’, ‘DD-MM-YYYY’)) AND TRUNC(TO\_DATE(’05-01-2018’, ‘DD-MM-YYYY’)) +0.999999 ;

<https://www.youtube.com/watch?v=jWKa1UcvCsQ>



CREATE OR REPLACE VIEW CONTRACTPROVIDER AS

SELECT GUEST\_NO

FROM HIRE\_CONTRACT

JOIN ITEM\_FOR\_HIRE ON (ITEM\_FOR\_HIRE.ITEM\_KEY = HIRE\_CONTRACT.ITEM\_KEY)

JOIN PROVIDER ON (PROVIDER\_PROVIDERID = ITEM\_FOR\_HIRE.PROVIDERID)

WHERE PROVIDER\_NAME = ‘Paddy Joe Flanagan’ AND date\_from > TRUNC(TO\_DATE(’01-01-2018’,’DD-MM-YYYY’));

SELECT LAST\_NAME, FIRST\_NAME

FROM GUEST

WHERE GUEST\_NO IN (SELECT GUEST\_NO FROM CONTRACTPROVIDER);

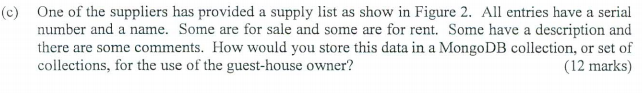


Select providerid, provider\_name from providers

Leftouter join item\_for\_hire on

item\_for\_hire.providerid = provider.providerid

where item\_key = null;



{

Supplier\_name: ‘Jacks fishing supplies’,

address: ’23 Main Street’,

telephone\_name: ‘090111111’

items: [

{

\_id: ‘1’,

serial\_no: ‘WEL2000’,

name: ‘Wellington Boots’,

sale\_status: ‘For Sale’,

sale\_cost: ‘€10-€50’,

hire\_status: ‘For Hire’

hire\_cost: ‘€5/day’,

availablity: ‘Check availability’,

item\_description: ‘An assortment of sizes and colours’

},

{

\_id: ‘2’,

serial\_no: ‘GAR1000’,

item\_name: ‘WindBreaker,

sale\_status: ‘For Sale’,

sale\_cost: ‘€50-€150’,

item\_description: ‘An assortment of thickness, colours and sizes’

},

{

\_id: ‘3’,

serial\_no: ‘BAG1000’,

item\_name: ‘Waterproof bag,

sale\_status: ‘For Sale’,

sale\_cost: ‘€60’

},

{

\_id: ‘4’,

serial\_no: ‘COO00’,

item\_name: ‘Portable cooler,

hire\_status: ‘For Hire’

hire\_cost: ‘€50/day’,

available: ‘Check availability’,

},

{

\_id: ‘5’,

serial\_no: ‘BOA1000’,

item\_name: ‘Fish Finder,

hire\_status: ‘For Hire’

hire\_cost: ‘€40/day’,

available: ‘Check availability’,

item\_description: ‘Shows where fish are’

},

{

\_id: ‘6’,

serial\_no: ‘BOA2000’,

item\_name: ‘Life Jacket’,

sale\_status: ‘For Sale’,

sale\_cost: ‘€90’,

hire\_status: ‘For Hire’

hire\_cost: ‘€30/day’,

available: ‘Check availability’,

item\_description: ‘Comes in assorted sizes’

},

{

\_id: ‘7’,

serial\_no: ‘FIS1000’,

item\_name: ‘Assorted tackle’,

sale\_status: ‘For Sale’,

sale\_cost: ‘€200’,

},

{

\_id: ‘8’,

serial\_no: ‘FIS2000’,

item\_name: ‘7 foot Boat Rod and Reel’,

sale\_status: ‘For Sale’,

sale\_cost: ‘€200’,

hire\_status: ‘For Hire’

hire\_cost: ‘€30/day’,

available: ‘Check availability’,

item\_description: ‘Accessories not included’

},

{

\_id: ‘9’,

serial\_no: ‘FIS2000’,

item\_name: ‘8 foot Boad Rod and Read’,

sale\_status: ‘For Sale’,

sale\_cost: ‘€250’,

hire\_status: ‘For Hire’

hire\_cost: ‘€35/day’,

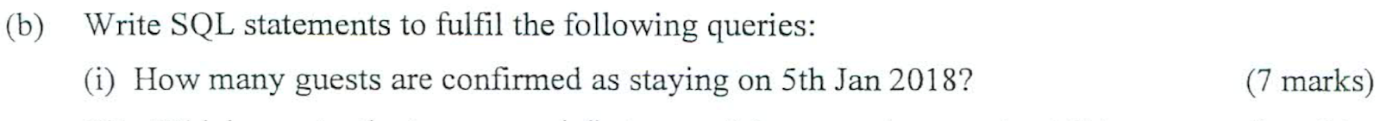
available: ‘Check availability’,

item\_description: ‘Accessories not included’

}

]

}



SELECT COUNT(GUEST\_NO) FROM STAY

WHERE STAY\_CONFIRMED **IS NOT** NULL AND TO\_DATE(’2018-01-05’,’YYYY-MM-DD’) **BETWEEN** STARTDATE **AND** ENDDATE;

Which guests (last\_name and first\_name) have made a contract (hire\_contract) to hire items provided by a provider named Paddy Joe Flanagan after 1s Jan 2018

SELECT FIRST\_NAME, LAST\_NAME

FROM GUEST

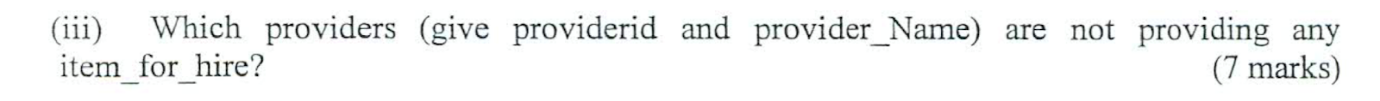
JOIN HIRE\_CONTRACT ON HIRE\_CONTRACT.GUEST\_NO = GUEST.GUEST\_NO

WHERE DATE\_FROM > TO\_DATE(‘2018-01-01’,’YYYY-MM-DD’) AND

ITEM\_KEY **IN** (SELECT ITEM\_KEY FROM ITEM\_FOR\_HIRE

JOIN PROVIDER ON PROVIDER.PROVIDERID = ITEM\_FOR\_HIRE.PROVIDERID

WHERE PROVIDER\_NAME = ‘Paddy Joe Flanagan’;



SELECT PROVIDERID, PROVIDER\_NAME

FROM PROVIDER

WHERE PROVIDERID

**NOT IN** ( SELECT PROVIDERID FROM ITEM\_FOR\_HIRE);

select count(guest\_no)

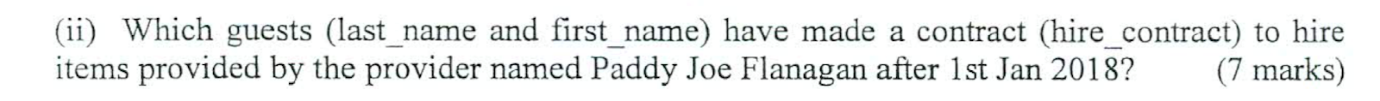
from stay

where

startdate <= "2018-01-05" and

enddate >"2018-01-05" and

stay\_confirm is not null;



select last\_name, first\_name

from hire\_contract

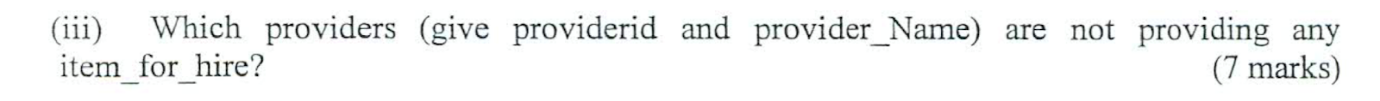
join item\_for\_hire using(item\_key)

join guest using(guest\_no)

join provider using(provider\_id) // received when joining item\_for\_hire

where date\_to > "2018-01-01" and

lower(provider\_name) like 'paddy joe flanagan';



// this solution has many variations, use the one that feels the most intuitive..

1. using subqueries

select providerid, provider\_name

from provider

where providerid not in (

select providerid from item\_from\_hire

);

**other alternatives**

2. using set operation

select providerid, provider\_name

from provider

**minus**

select providerid, provider\_name

from item\_for\_hire

join provider using(provider\_id); // needed because they have to have the same columns

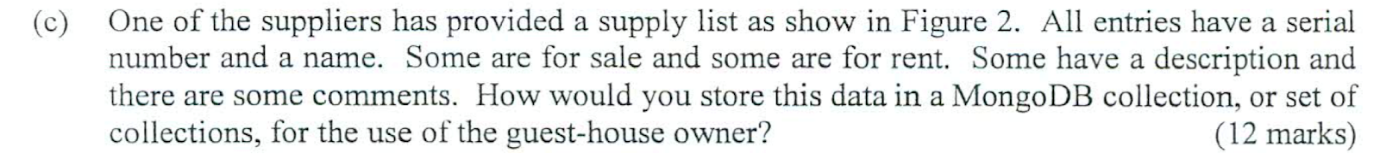
2. using joins

select providerid, provider\_name

from item\_for\_sale

left join provider using(providerid)

where providerid is null;



// NOTE controversial question: political answer ahead



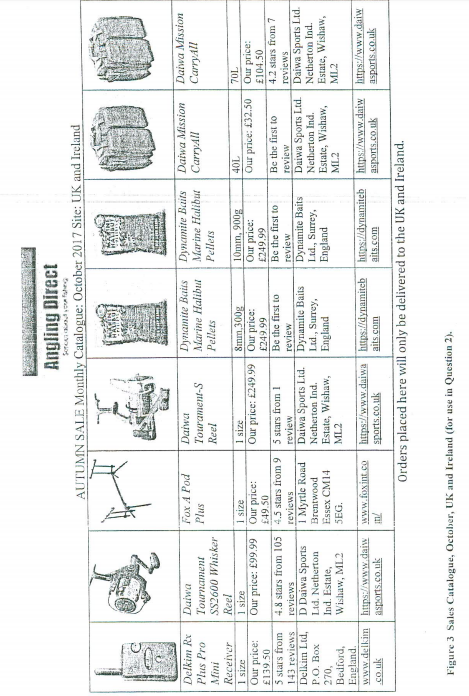
The above data encapsulates a single supplier with his/her list of items for hire/sale.

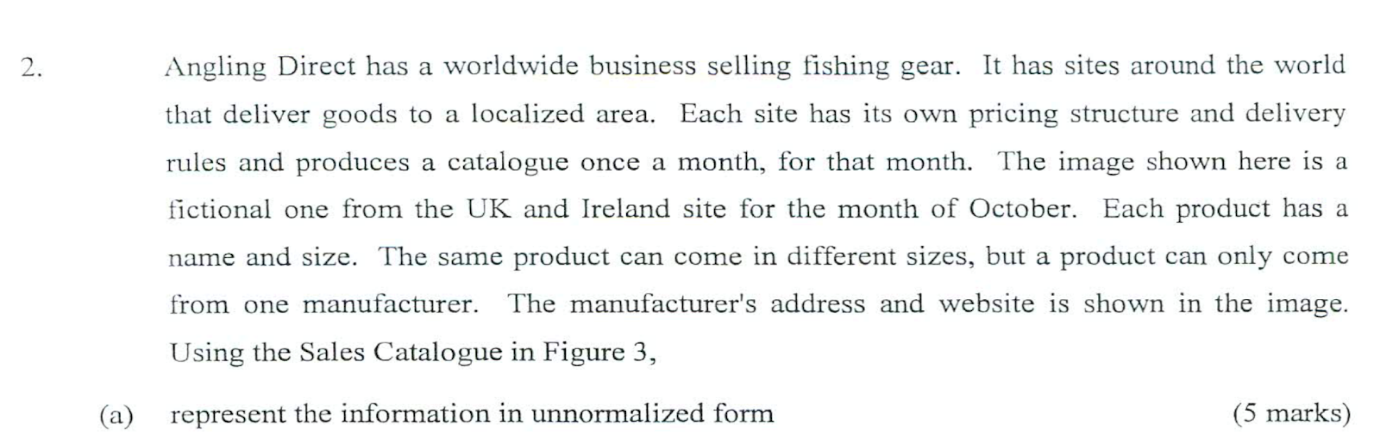
In mongoDB, these two entities can be stored in one collection i.e within the supplier collection, keep an array field (sub-collection) containing all items this supplier has.

Another way of storing the above data in mongoDB would be to have the items of each supplier as documents in a separate collection, keeping their \_id as reference in the supplier collection within an array. This could be beneficial if embedding the item info with the supplier info within a subcollection array could make the supplier document exceed the 16Mb doc size allowed by mongoDB.

But this I would discourage if it is not the case in order to minimise the joins that will have to be done to query the fields of the items to hire/sale by the guest-house such as: checking if they are for hire/sale, their price range etc.

Q2. see others





**UNF** :

* list attributes separating them with '+'
* remove duplicates(multiple values) of devivated fields (things that can be computed)
* surround repeating groups with { }

// star\_count can be computed using an assumed review table

// review\_count can also be computed using an assumed review table

// sizes is a duplicate

// the address also has values that needs to be broken down further

**Form** = region + month + product\_name + ~~sizes~~ + price + ~~star\_count~~ + ~~review\_count~~ + ~~manufacturer\_address~~+ manufacturer\_website

**Form** =

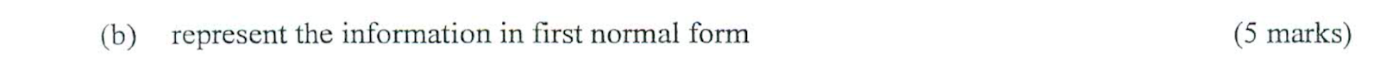
{**region** + **month**} +

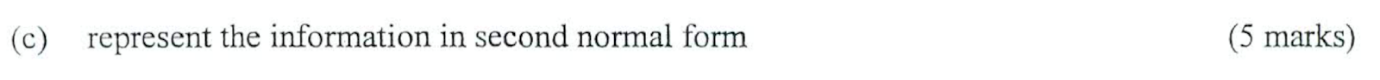
{**product\_name** + price } +

{**review\_id**, rating, review\_text} +

{size\_value} +

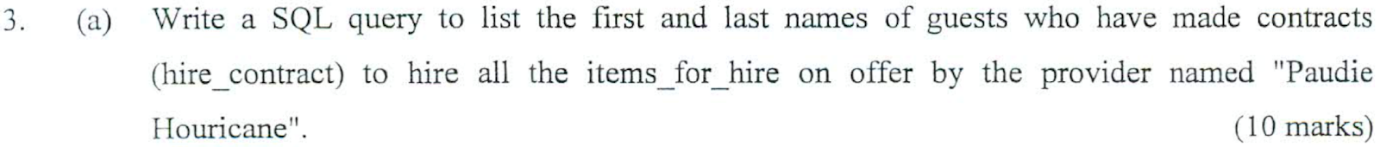
{manufacturer\_website, address1+address2+ state}



**1st NF**: **1NF:** 

**2nd NF**:

Q3.



SELECT FIRST\_NAME, LAST\_NAME

FROM GUEST

JOIN HIRE\_CONTRACT ON HIRE\_CONTRACT.GUEST\_NO = GUEST.GUEST\_NO

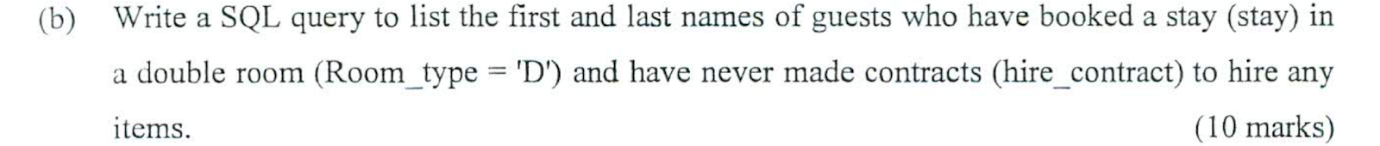
**HAVING** COUNT(HIRE\_CONTRACT.ITEM\_KEY) = (

SELECT COUNT(ITEM\_FOR\_HIRE.ITEM\_KEY)

FROM ITEM\_FOR\_HIRE

JOIN PROVIDER ON PROVIDER.PROVIDERID = ITEM\_FOR\_HIRE.PROVIDERID

WHERE PROVIDERNAME = ‘Paudie Houricane’);



CREATE OR REPLACE VIEW NOHIRE AS

SELECT \*

FROM GUEST WHERE GUEST.GUEST\_NO

**NOT IN** (SELECT HIRE\_CONTRACT.GUEST\_NO FROM HIRE\_CONTRACT);

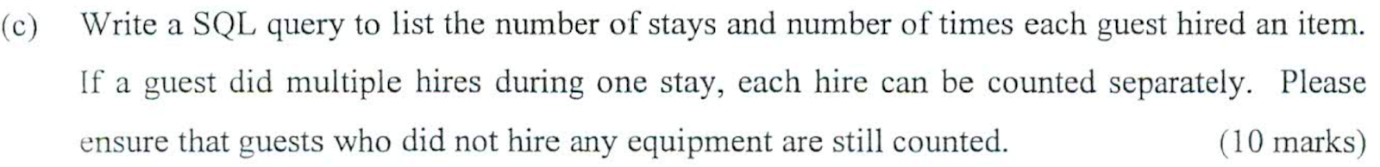
SELECT NOHIRE.FIRST\_NAME, NOHIRE.LAST\_NAME

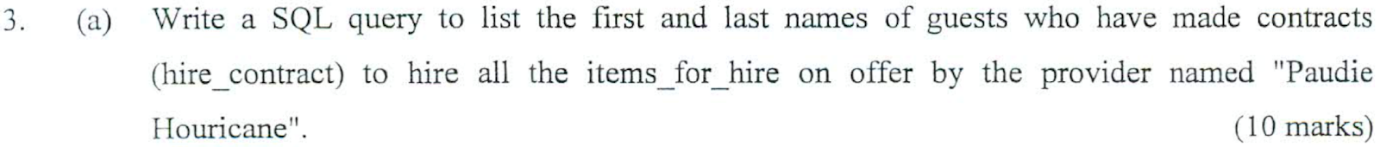
FROM NOHIRE

JOIN STAY ON STAY.GUEST\_NO = HIRENO.GUEST\_NO

JOIN ROOM ON ROOM.ROOM\_NO = STAY.ROOM\_NO

WHERE **ROOM.ROOM\_TYPE = ‘D’;**





select last\_name, first\_name

from hire\_contract

join items\_for\_hire using(item\_key)

join guest using(guest\_no)

join provider using(provider\_id) // received when joining item\_for\_hire

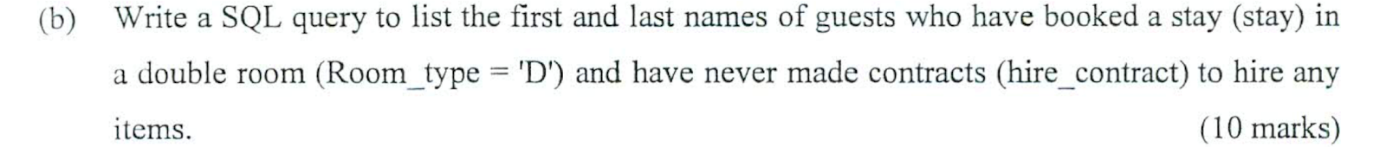
where count(guest\_no) = (

select count(item\_key)

from items\_for\_hire

where lower(provider\_name) like 'paudie houricane'

);



// alternatively joins and sets could be used

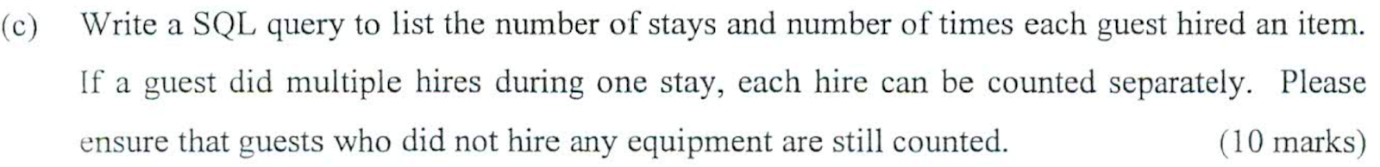
select last\_name, first\_name

from stay

join room using(room\_no)

join guest using(guest\_no)

where room\_type='D' and  guest\_no not in ( select guest\_no from hire\_contract);



SELECT COUNT(STAY.GUEST\_NO) AS NOSTAYS, (SELECT COUNT(HIRE\_CONTRACT.GUEST\_NO FROM HIRE\_CONTRACT

WHERE GUEST.GUEST\_NO = HIRE\_CONTRACT.GUEST\_NO ) AS NOHIRES

FROM STAY

JOIN GUEST ON GUEST.GUEST\_NO STAY.GUEST\_NO;

// count the number of stay

select count(guest\_no), num\_of\_stay = (

select count(guest\_no) from stay

where stay.guest\_no = guest\_no

) from guest