

12. A holiday rental shop rents a range of items to customers. It uses a relational database consisting of three linked tables storing data on items, customers and rentals.

When initially designing the `Rental` table for this database, the primary key was designed using a compound key of `customerID` and `itemID`.

Rental
<u>customerID*</u>
<u>itemID*</u>
startDate
noOfDays

An example of the data to be stored in the `Rental` table is shown below.

Rental			
customerID	itemID	startDate	noOfDays
AM974	CB001	26/06/2021	14
AM974	KB001	30/06/2021	3
DR734	MS003	05/07/2021	7
AM974	RB002	30/06/2021	3
JS003	KB002	04/07/2021	2
JS003	KB002	10/07/2021	1
JS003	RB001	04/07/2021	2
KW001	WH001	10/07/2021	14
RB435	MS003	15/07/2021	14
SP234	CB001	02/08/2021	7
DR734	KB001	06/07/2021	6
DR734	IR001	07/07/2021	2
...

- (a) Explain why a compound key of `customerID` and `itemID` would mean that the table is not fit for purpose.

1



* S 8 1 6 7 6 0 1 2 2 *

12. (continued)

- (b) The `Rental` table was re-designed with a primary key called `rentalID`.
Extracts from the three tables are shown below.

Rental				
rentalID	customerID	itemID	startDate	noOfDays
REN14	AM232	EK001	01/08/2021	14
REN1	AM974	CB001	26/06/2021	14
REN2	AM974	KB001	30/06/2021	3
...

Customer				
customerID	firstName	surname	hotel	resort
AM232	Amy	Moore	Esmerelda	Caleta
AM974	Amy	Moore	Labranda	Jandia
DR734	Darcia	Rycroft	Arenas	Corralejo
...

Item			
itemID	itemType	itemModel	dailyRentalPrice
CB001	Children's buggy	Basic	£6.00
CB002	Children's buggy	Mid	£7.00
CB003	Children's buggy	Deluxe	£9.00
EK001	Kettle	Mid	£4.00
IR001	Iron	Mid	£3.00
KB001	Kid's bike	Basic	£14.00
...

[Turn over



12. (b) (continued)

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A list is required to show details of all rentals with a start date in July 2021. The list should display the calculated rental cost for each rental, as shown below.

customerID	itemType	startDate	Rental Cost
JS001	Manual wheelchair	02/07/2021	£32.00
JS003	Road bike	04/07/2021	£40.00
JS003	Kid's bike	04/07/2021	£30.00
DR734	Mobility scooter	05/07/2021	£126.00
DR734	Kid's bike	06/07/2021	£84.00
DR734	Iron	07/07/2021	£6.00
AM974	Road bike	08/07/2021	£42.00
KW001	Manual wheelchair	10/07/2021	£112.00
JS003	Kid's bike	10/07/2021	£15.00
KW001	Kettle	12/07/2021	£48.00
RB435	Mobility scooter	15/07/2021	£252.00

Design a query to produce this sorted output.

4

Field(s) and calculation(s)	
Tables(s) and query	
Search criteria	
Grouping	
Sort order	



* S 8 1 6 7 6 0 1 2 4 *

12. (continued)

- (c) A query was created to display the highest daily rental price. This query was saved as 'MaxRental'.

Max daily rental
23.00

Using the 'MaxRental' query, complete the SQL statement below to display the item type and item model of any item matching this highest price.

2

```
SELECT itemType, itemModel
```