

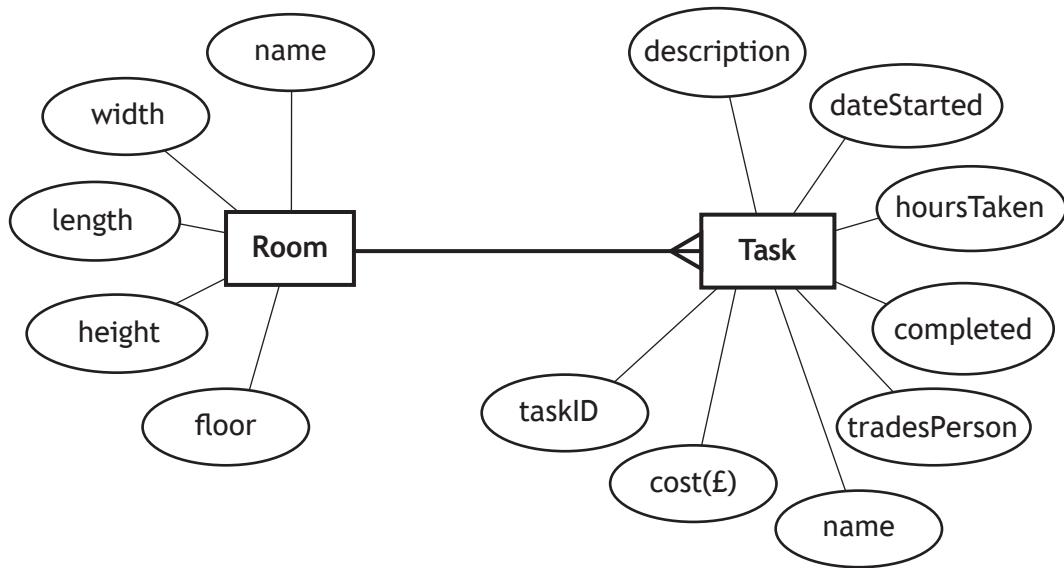
14. A property renovation company requires a relational database to store information about the tasks to be carried out on each room of a house.

The functional requirements for the database are identified:

- Store details of each room in the house.
- Store details of each task.
- Output a list of tasks carried out by one of the following trades people: electrician, builder, plasterer, decorator, carpenter, plumber.
- Output a list of tasks completed for a single room.

- (a) (i) Complete the entity relationship diagram below by identifying key attributes.

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- (ii) Use the functional requirements above to identify the attribute in the 'Task' entity that would be implemented using restricted choice validation.

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- (b) Explain why the General Data Protection Regulations do not apply to the information that will be stored in this database.

1

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## 14. (continued)

- (c) The relational database is implemented. The data it currently stores is shown below.

Room				
name	width	length	height	floor
living	4.20	4.05	2.20	ground
kitchen	3.25	2.70	2.20	ground
dining	3.05	3.10	2.20	ground
bedroom	3.70	4.15	2.15	first
bathroom	1.80	2.10	2.15	first

Task							
taskID	description	dateStarted	hours Taken	completed	trades Person	cost(£)	name
1	Fit new sink	12/4/2022	4	true	plumber	98.58	bathroom
2	Paint living room door	12/4/2022		false	decorator		living
3	Paint kitchen	13/4/2022	3	true	decorator	120.00	kitchen
4	Fit kitchen cupboards	15/4/2022	32	true	carpenter	1790.00	kitchen
5	Plaster walls	16/4/2022		false	plasterer		bedroom
6	Fit new bath	16/4/2022	8	true	plumber	278.54	bathroom
7	Fit new door to bedroom	18/4/2022		false	carpenter		bedroom
8	Paint bedroom	18/4/2022		false	decorator		bedroom



\* X 8 1 6 7 5 0 1 2 4 \*

14. (c) (continued)

**MARKS** DO NOT  
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MARGIN

A porch is to be built onto the front of the house.

The porch is added as a new room by executing the following SQL statement.

```
INSERT INTO Room (name, width, length, height, floor)  
VALUES ("Porch", 1.20, 1.40, 2.10, "ground");
```

The task ‘construct porch’ needs to be added. This task was started by a builder on 19 April 2022. The work is not completed so the hours taken and cost are not yet known.

Write an SQL statement that will add this work to the Task table.

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(d) The bedroom is no longer being renovated.

The following SQL statements are written to remove the bedroom tasks from the Task table.

```
DELETE FROM Task  
WHERE taskID = 5;
```

```
DELETE FROM Task  
WHERE taskID = 7;
```

```
DELETE FROM Task  
WHERE taskID = 8;
```

Write a single efficient SQL statement to remove the bedroom tasks.

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