Databases and sql assignment 2

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Contents

[Task 1: 2](#_Toc148965958)

[Task 2: 4](#_Toc148965959)

[Task 3: 5](#_Toc148965960)

[Task 4: 5](#_Toc148965961)

[Task 5: 5](#_Toc148965962)

[Task 6: 6](#_Toc148965963)

[Task 7: 6](#_Toc148965964)

[Task 8: 7](#_Toc148965965)

[Task 9: 7](#_Toc148965966)

[Task 10: 7](#_Toc148965967)

[Task 11: 8](#_Toc148965968)

[Task 12: 8](#_Toc148965969)

[Task 13: 9](#_Toc148965970)

[Task 14: 9](#_Toc148965971)

# Task 1:

In terms of relationships in relational databases there are three main ones, these are:

* One to one
* One to many
* Many to many

A diagram of a graph

Description automatically generated with medium confidenceOne to one relationship in relational databases are when one table relates to another but with only a single variable, an example of this is:

A black grid with white lines and white text

Description automatically generatedOne to many relationships in a relational data base is when one table can relate to another, but this time of these tables have multiple variables that can link back to only one variable in another table, an example of this is:

Many to many relationships in a relational database is when one table relates to another table, but this time has multiple relationships coming in from both sides, an example of this is:

A screenshot of a computer

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# Task 2:

Normalisation by definition is when you reduce data redundancy and improve the integrity as efficiently as possible neatly and this is specifically important to database design as not only does it save space but reduces the complexity and additional things like more columns being need in a single table, thus doesn’t mean many to many relationships are completely invalid as outside database designs it could be a valid thing, however for the sake of efficiency and integrity its not advisable.

An example of normalisation can be when you can two tables with an existing many to many relationships, and in this case what you can do is something called “bridging”. This is when you create a third table in the middle with both primary keys from each table and link those two tables with the one in the middle with a one-to-many relationship, as seen below:

A screenshot of a computer

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# Task 3:

A screenshot of a computer

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# Task 4:

A screenshot of a computer

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# Task 5:

A screenshot of a computer

Description automatically generated

# Task 6:

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# Task 7:

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# Task 8:

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# Task 9:

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# Task 10:

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# Task 11:

A screenshot of a computer

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# Task 12:

A screenshot of a computer

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# Task 13:

A screenshot of a computer

Description automatically generated

# Task 14:

* Identify the primary key in country table.

A blue and black text

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* Identify the primary key in city table.

A blue rectangle with black text

Description automatically generated

* Identify the primary key in countrylanguage table.



* Identify the foreign key in city table.
* Identify the foreign key in countrylanguage table.

A close up of a computer screen

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