

Relational databases and structured query language (SQL) - GCSE Computer Science Paper 2

1. No.14

1 4

A teacher keeps a record of books loaned to students.

The teacher uses a relational database containing three tables, **BookCopy**, **Student** and **Loan**. **Figure 5** shows some data from the tables.

Figure 5**BookCopy**

CopyID	BookTitle
HT001	HTML 4 Fun
PB002	Python Basics
GC001	GCSE Computing
GC002	GCSE Computing
GC003	GCSE Computing
GC004	GCSE Computing
RG001	GCSE Revision Guide

Student

StudentID	FirstName	LastName	YearGroup
TUC004	Barry	Tucker	8
WAY002	Shania	Wayneton	10
KOW001	Bartek	Kowalski	11
AZE001	Faisal	Azeez	9
BAK007	Jolene	Baker	11
ANA002	Aisha	Anand	11
OKA003	Sani	Okafor	10

Loan

LoanID	StudentID	CopyID	DepositPaid
L0001	TUC004	HT001	0.50
L0002	WAY002	GC004	2.00
L0003	KOW001	GC001	2.00
L0004	TUC004	PB002	0.75
L0005	BAK007	RG001	2.50
L0006	BAK007	GC002	2.00
L0007	OKA003	GC003	2.00

1 4 . 1

Shade **two** lozenges to show which of the following statements are benefits of relational databases.

[2 marks]

A All the information can be stored in one table.

☐

B Redundant data is less likely to be stored.

☐

C Tables don't need primary keys.

☐

D There are less likely to be data inconsistencies.

☐

1 4 . 2

State **one** field in the **Loan** table that is a foreign key.

[1 mark]

1 4 . 3

State the most suitable data type for the **DepositPaid** field in the **Loan** table.

[1 mark]

Figure 5 has been included again below.

Figure 5

BookCopy

CopyID	BookTitle
HT001	HTML 4 Fun
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Loan

LoanID	StudentID	CopyID	DepositPaid
L0001	TUC004	HT001	0.50
L0002	WAY002	GC004	2.00
L0003	KOW001	GC001	2.00
L0004	TUC004	PB002	0.75
L0005	BAK007	RG001	2.50
L0006	BAK007	GC002	2.00
L0007	OKA003	GC003	2.00

1 4 . 4

Year 11 students must return their books after they have finished their GCSE exams.

Using the database shown in **Figure 5**, write an SQL query that lists all the loans for students who are in Year 11.

The query must **only** return:

- both names of the student
- the ID of the book borrowed
- the deposit paid.

The results must be in ascending order of the students' last names.

[6 marks]

1 4 . 5

Barry Tucker has returned their copy of the book Python Basics.

Complete the SQL to delete the loan record for the book PB002.

[2 marks]

DELETE FROM _____

WHERE _____