

# Deyes High School Remote Learning



DEYES  
HIGH  
SCHOOL  
LYDIATE  
LEARNING TRUST

# Year 13 CTEC

Engage, Enable and Empower

Work for individual students not attending school

Half Term 2: October to December

Pupils who are absent should select the activity that they are up to. Click on the link in the activity box below. This will take you to Office 365 where the work is stored. In the lesson it will tell the pupil if they need to submit the work to their teacher.

## Lessons

Date (week commencing)	Lessons	Focus/Topic/Theme	Hyper link to Activity
2/11/20	1	P3 -Prepare Page Designs	<a href="#">Page Designs</a>
9/11/20	2	D1 - Justify Page Designs	<a href="#">Justify Page Design</a>
16/11/20	3	P3 - Prepare Table, Relationship, Case, Flow Diagram designs	<a href="#">Diagram Designs</a>
23/11/20	4	P4 & M3 – Present Solution – Negotiate adaptations	<a href="#">Present Solution</a>
30/11/20	5	P5 – Create Database	<a href="#">Create Database</a>
7/12/20	6	P6 – Gather client Feedback	<a href="#">Gather client Feedback</a>
14/12/20	7	D2 – Implement Improvements	<a href="#">Implement Improvements</a>

**Knowledge organiser: Cambridge Technicals Unit 6 Databases**

**Summary**  
A database is a way of storing information in an organised, logical way. Validation and verification are two ways to check that the data entered into a computer is correct. Data entered incorrectly is of little use.  
There are two main methods of verification:  
**Double entry** - entering the data twice and comparing the two copies. This effectively doubles the workload, and as most people are paid by the hour, it costs more too.  
**Proofreading data** - this method involves someone checking the data entered against the original document. This is also time-consuming and costly.  
**Validation** is an automatic computer check to ensure that the data entered is sensible and reasonable. It does this in a number of ways:

**Relational database**  
A relational database has more than one table and the tables are linked using key fields. For example, a library database could have three tables:  
**Customer** - when a customer joins the library a record is created. It stores their details such as their first name and surname and includes a unique Customer ID.  
**Book** - each book in the library has a record. It stores details about the book, such as the author and title and includes a unique book ID.  
**Lending** - when a customer borrows a book, the lending table stores the customer's unique ID and the book's unique ID in a record. The record could also include additional information such as when the book was borrowed and when it's due back.

**Why use a database?**  
• Databases can store very large numbers of records efficiently (they take up little space).  
• It's very quick and easy to find information.  
• It is easy to add new data and to edit or delete data.  
• Data can be searched easily, e.g. 'find all Ford cars'.  
• Data can be sorted easily, for example into 'date first registered' order.  
• Data can be imported into other applications, for example a mail merge letter to a customer listing that an MOT test is due.  
• More than one person can access the same database at the same time - multi-access.

**Validation**  
For example, a secondary school student is likely to be aged between 11 and 16. The computer can be programmed only to accept numbers between 11 and 16. This is a range check.

**Key Vocabulary**

**Criteria** A set of rules or conditions that must be met. Often used in searches.  
**Database** A data store designed in an organised way, making it easier to search for the information you need.  
**Field** An element of a database record in which one piece of information is stored. For example 'name' in an electronic address book.  
**Front-end** The part of an application seen and used by the end user.  
**Key field** A unique identifier for a database record or table entry.  
**Multi Access** A system that can be used by several users simultaneously via a local area network (LAN).  
**Query** A search or question performed inside a database.  
**Record** All of the data relating to one entry in a database.  
**Validation** Checking input data is sensible and in the right format.  
**Verification** An operation is performed to ensure that the data entered exactly matches the original source.

**Data capture**  
Before setting up a database the data must be collected. This can be done using a data capture form.  
A data capture form is designed to collect specific data.

**Boxes**  
Data capture forms often use boxes or a set amount of spaces and occasionally provide examples too.  
This is to make sure each field is completed correctly.

**Library relational database**

**Types of validation**  
There are a number of validation types that can be used to check the data that is being entered.

- Range check** Checks if the value of data is within a certain range e.g. the month of the year must be between 1 and 12
- Type check** Checks if the data is of the correct type e.g. letter or number.
- Check Digit** Used to perform a mathematical check to ensure the accuracy of the scanned or manually entered data.
- Length check** Checks that the data entered has the correct number of characters.
- Loopback** Checks that the data entered is from an acceptable list of values.
- Presence check** Check that some data has been entered into a field.

**Types of validation**

Key Terms	Definition
<b>Flat File Database</b>	When a database has only one table and everything is stored in the one table.
<b>Relational Database</b>	This is when a database contains more than one table and these are linked together.
<b>Primary Key Field</b>	This is a field which allows the user to uniquely identify a record in the table.
<b>Foreign Key</b>	A link to a primary key in a related database table.
<b>Entity</b>	An object in a database, e.g. a person etc.

**Data Types**

Type	Description	Example
<b>AutoNumber</b>	Generates a number automatically	1,2,3
<b>Text</b>	String of letters and number, or numbers not used in a calculation.	Jones, L31 6DE, Deyes High
<b>Number</b>	Integer, decimal or positive/negative numbers	1, 1.32, -5
<b>Currency</b>	Numbers including the symbol for monetary values.	£50.99
<b>Boolean</b>	Values which are either yes or no, on or off, yes or no	Yes or No, True or False
<b>Date/Time</b>	Dates in many different formats or time values	16/08/2020 15:48 pm

**Operator Description**

>	Greater Than
<	Less Than
=	Equal To
>=	Greater than or equal to
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## Knowledge Organiser



CTEC – Unit 6 – Apps Design

## Who to contact

Who to contact. You can email your class teacher if you have any questions regarding the activities set.

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