

Databases Tasks:

Task 1

Research “What is a database?”

Discuss how what a database is, how data is stored and advantages of using databases.

Task 2

Below is a simple flat file database for hospital patients’ example.

Define the following key terms and identify where there are examples of them on the table.

Field

Record

Table

Primary Key

Patient Id	Name	D.o.B	Gender	Phone	Doctor Id	Doctor	Room
134	Jeff	4-Jul-1993	Male	7876453	01	Dr Hyde	03
178	David	8-Feb-1987	Male	8635467	02	Dr Jekyll	06
198	Lisa	18-Dec-1979	Female	7498735	01	Dr Hyde	03
210	Frank	29-Apr-1983	Male	7943521	01	Dr Hyde	03
258	Rachel	8-Feb-1987	Female	8367242	02	Dr Jekyll	06

Task 3

Research what is meant by ‘Data redundancy’ in a database.

What is a solution for data redundancy in a database?

Explain what a relational database is.

Task 4

Watch https://www.youtube.com/watch?v=UY3zc9G_YZo

If your feeling brave. Have a go at normalising:

Player ID	First Name	Last Name	Date of Birth	Team ID	Address	Parent/Guardian Name	Contact Number	Team Name	Coach ID	Coach First Name	Coach Surname	Coach Contact Number
1	John	Smith	2005-08-15	1	123 Main St	Jane Smith	555-123-4567	Lions	101	David	Johnson	555-111-2222
2	Emma	Johnson	2006-03-22	1	456 Oak Ave	Mark Johnson	555-987-6543	Lions	101	David	Johnson	555-111-2222
3	Michael	Williams	2005-11-03	2	789 Elm Rd	Sarah Williams	555-246-1357	Tigers	102	Sarah	Davis	555-333-4444
4	Olivia	Brown	2006-06-10	2	321 Pine Ln	David Brown	555-864-2091	Tigers	102	Sarah	Davis	555-333-4444
5	James	Taylor	2005-09-18	1	654 Cedar Ave	Laura Taylor	555-319-6078	Lions	101	David	Johnson	555-111-2222
6	Sophia	Davis	2006-04-01	2	987 Maple St	Kevin Davis	555-740-2865	Tigers	102	Sarah	Davis	555-333-4444
7	Benjamin	Rodriguez	2005-12-27	1	741 Oak Rd	Maria Rodriguez	555-592-1374	Lions	101	David	Johnson	555-111-2222
8	Isabella	Martinez	2006-07-14	2	258 Elm Ln	Jose Martinez	555-917-4632	Tigers	102	Sarah	Davis	555-333-4444

Helpful links

https://www.ictlounge.com/html/types_of_databases.htm

<https://student.craigndave.org/videos/ocr-alevel-slr10-databases-part-1>

<https://www.computerscience.gcse.guru/theory/what-is-a-database>

<https://www.bbc.co.uk/bitesize/guides/zswnb9q/revision/1>

Information and Technology Task:

Choose a company to do an in-depth investigation into.

You will need to research and create a report including:

- What IT system do they currently use?
- What devices form part of the IT system?
- What type of operating system do they use?
- What other software is used?
- What factors affected the choice of software?
- What file types are typically use and what is the reason for this?
- What emerging technologies are they aware of? Are there any that they are using? If so how?
- What type of network id the IT system using?
- How is data transmitted/shared within the company?
- How does the company use online communities to interact with customers? What type of online communities do they use? Do they use each for different purposes?
- How does the company protect from threats to data?
- What legal issues do they need to consider when using their IT systems and processing data?