

Meaningful Learning Experiences

Strategic Commitment	✓	Part of an academy group series of pilot projects
Curriculum Provision	✓	Helping year 10/11 students with revision about Databases
Employer Partnerships	✓	Making effective use of a corporate volunteering programme
Reflective Young People		
Informed Career Choices	✓	Raising awareness about career roles using Computing skills

'Mini-Masterclass' video clips help GCSE students with revision about Databases

The Farnborough Academy in Nottingham, part of the Trent Academies group, has combined Computing and Business Studies into a single faculty. The GCSE specification requires students to learn about concepts of databases, database management systems (DBMS) and relational databases. Students are provided with a revision work book and other resources on a VLE, although teaching staff acknowledge it can be difficult to make the topic engaging for students.

Experian is a leading global information services company, providing data and analytical tools to clients around the world. The organisation employs approximately 17,000 people in 37 countries and one of its operational headquarters is in Nottingham. The company encourages staff to undertake volunteering in the community as part of its Corporate Social Responsibility strategy.

A request submitted through this programme identified a 'Data Manipulation Specialist' who was willing to be recorded speaking on a series of topics about databases. He was able to speak informally and without much preparation, using examples from the business and from his own career experience.

The video clips were embedded in the VLE to enhance other learning and revision material, complementing a revision work book prepared by one of the teaching staff.

Benefits for the Students

- *'The biggest benefit is putting the idea of a database into context and their value in the world of work. It's quite an abstract concept to deliver when just theory.'*
- *'Each section of the spec that is covered more or less has a relevant video. The pupils can work through the revision, watch a supporting video, and then try an exam question. That would be far more engaging and interesting than just a work book.'*

Benefits for the School

- Experian is a major local employer and the company’s involvement helped to highlight the professional roles open to people with Computing and Database skills.
- This project was led by the Head of Computing & Business, who now recognises that Experian can potentially enhance and enrich learning across many different topics.
- The process for submitting future applications for volunteer staff from Experian’s CSR programme can now be used by other departments across the Trent Academies Group.

Benefits for the Employer

- Volunteering roles can often involve community projects that neither promote the company’s business activity nor utilise the skills and knowledge of staff.
- In this case, the data manipulation specialist was able to talk informally about the curriculum topic - including examples – without the need for time-consuming preparation.
- Raising awareness about job opportunities in information services is likely to encourage young people to consider career paths in this sector.

DATABASES

Relational Databases

SOLVING THE PROBLEMS OF FLAT FILE DATABASES
Looking again at our bad flat file database we can see that the first issue is that that we have duplication of a lot of data. This is known as data redundancy.

A relational database solves this by separating the data into different tables. To do this we use the concept of entities. An entity is a thing. This can be a physical thing like a customer or a item to be loaned, or it can be a concept like the loan itself. Each entity is stored in its own table. However these entities are related to each other and so we need a way of keeping this relationship intact.

Each record in a table is unique and is given a unique identifier. This identifier is used to create a link between tables. An identifier can be any field as long as its unique. Unfortunately unique fields are hard to come by, so often a number is often generated that is unique. This is why we often have ID numbers for things like passports, bank accounts and student IDs in schools.

Surname	Forename	Address	Town
Simpson	Homer	768 Emington Terrace	Spring
Gumble	Barney	7 Beer Gardens	Spring
Cutman	Eric	1245 Snowy Crescent	South
Simpson	Homer	768 Emington Terrace	Spring
Simpson	Homer	768 Emington Terrace	Spring
Gumble	Barney	7 Beer Gardens	Spring
Cutman	Eric	1245 Snowy Crescent	South
Simpson	Homer	768 Emington Terrace	Spring

Looking at our bad flat file database database multiple times. We can't see the table. The unique ID field is key.

Heart of Experian CHARITY FUND
Registered charity, number 1120266

Volunteering request

Name of your organisation:
The Fenborough Academy

Address:
Fenborough Road,
Clifton,
Nottingham
NG2 1 5TH

Named contact:
Gerald Linton (consultant working with The Fenborough Academy and others in the Trent Academies Group)

Contact number:
07973 837 342

Email address:
gswc@forum-talent-potential.org

Website address:
www.forum-talent-potential.org + www.thefenboroughacademy.co.uk

Brief description of task:
The project will help students studying GCSE Computing learn how to:
- Select data types to match the data
- Create a database including adding, editing and deleting
- Create a query from more than one table
- Produce a professional report
- Be able to secure a database and understand other security measures
- Back-up their own data and suggest ways to back-up databases.

Date task needs to be completed by:
Materials to support classroom learning required ASAP. School visit for non-attendance mid-November.

Number of people anticipated to complete the task in a day:
1-2 people required to support the project.

Please complete a separate form for each project but you can submit as many forms as you need. All projects are then advertised internally to Experian employees. Once a team or individual selects your task they will contact you to arrange a date that is suitable for both. At this point a pre-site visit may also be arranged to discuss your requirements in more detail. For any further information please contact CommunityInvolvement@uk.Experian.com



A volunteer request to Nottingham-based global information services company Experian resulted in a series of informal, short video clips by a database expert. He addressed topics that students needed to learn and revise about Databases as part of the GCSE curriculum.

