## ICT @ Brooke Weston Academy

Unit 06 (AO3) – Advanced Databases

**Interrogate the database**

**Scenario**

Cube Systems have been very successful with their sales of customised computers and software. This has resulted in the need to store large quantities of data and produce a variety of well structured reports. Knowing the power of Relational Databases to store the large amounts of data and produce reports, they have decided to develop a Relational Database for their customers and sales.

REMEMBER:

* Customers choose the configuration of computer based on multiple choices such as the speed of the processor, size of the RAM, monitor or hard drive and software.
* Certain options do attract discounts and customers have delivery options such as next day, 2 day or 4 day which all have different price points – if the customer spends over a certain price point they will get free delivery.

Cube systems would like a fully functional and automatic Relational Database system which could incorporate:

* ***A customer page*** – where customers can be added, edited and viewed
* ***A customer orders page*** – where customer orders can be viewed
* ***A product page*** – where all the products for sales can be added, edited and viewed
* ***A ordering page*** – where all the orders can be added, edited and viewed
* ***A invoice page*** – where the user selects what the customer requires and prints the invoice
* ***A reporting page*** – where reports such as the analysis of:
  + Orders of any particular product
  + Profit made on each product
  + Tracking of customer orders and purchases
  + Calculating totals of ordered product over a given period
  + Customers traced based on any other information required

Focusing on the business, you need to produce a database that will store information within a relational database, covering the following **3** tasks within this case study:

* 1. Leszynski Naming Convention – Standardising your Database
  2. Queries
  3. Implementation of Database

Basically, you need to:

**Introduction**

1. What is this case study about?
2. Summary thescenario from AO1
   * Briefly introduce the **business you have selected** and ***describe the range of information you wish the database to manage***
     + ***Consider the type of information that the database could use***

**Main Investigation**

**Queries**

1. ***(Task 1)*** – Create a table as shown to describe and use a range of different queries within your database that utilise the multiple linked tables:
   * **At least three different logical operators**
   * **At least three different range operators**
   * **parameter queries**
   * **crosstab queries**
   * **calculated fields**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Query Name** | **Description** | **Tables** | **Fields** | **Parameter** | **Potential problems in construction** |
| Appropriate name for query | Explain what you expect to gather from the table | Table you will query | Fields that used during the query | Value used to search for information from the table | Explain any problems with the query |
| Qry\_customerspend500ormore | Displays all customers spending over £500 | Tbl\_Customer  Tbl\_Orders | Forename  Surname  PhoneNo  Destination  Price | >500 | Correct operator used and numeric value provide as a parameter |

1. ***(Task 2)*** – Create the forms based on the designs produced within your database
   * Provide screenshot evidence for creating the queries

**Implementation of Database - *(Task 3)***

1. Illustrate evidence (screenshots) in the form of using a consistent and appropriate styling in the design and construction of a database for:
   * Naming of all database queries
   * Name of fields used within the database tables and queries